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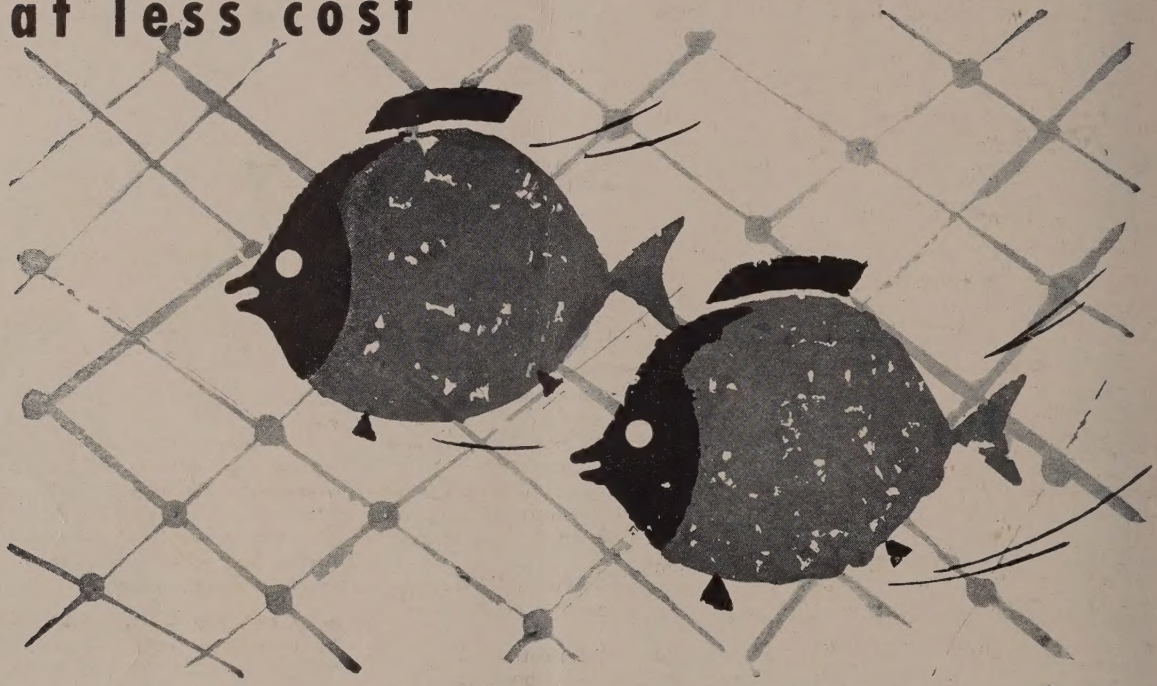

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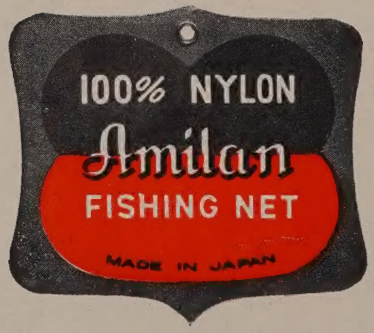

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PACIFIC FISHERMAN

Our Fifty-Sixth Year— **DECEMBER 1958** Vol. 56 No. 13

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Seaton's Switch

● In an obvious, and futile, effort to influence Alaska voters in favor of Mike Stepovich, Republican nominee for United States senator, Secretary of the Interior Fred Seaton in November promised that the 1959 Alaska fishery regulations would provide for the immediate closure of all Alaska salmon traps, save only for eight held by Indian tribal communities.

Never before had the management of national natural resource been laid more barefacedly on the altar of partisan politics.

The action failed to elect Stepovich, and some observers believe it hurt him.

Certainly it hurt Seaton; and it was a crushing blow to those who have contended conscientiously that fishery conservation and resource management can, and should, be divorced from party politics.

● Salmon traps obviously were due for elimination as Alaska entered into statehood. Anyone could see that, but there was no agreement on timing. That it should come without warning in the 1959 fishery regulations under the authority of the Secretary of the Interior certainly was not anticipated.

For years Interior had contended that its authority over Alaska fisheries was limited to control required for conservation; and that traps were not inimical to conservation.

● Seaton's closure unquestionably will be attacked in the courts on this very point—whether elimination of one form of fishing gear, which has been considered legitimate by the regulatory authority for decades, can be justified as essential to conservation.

Opponents of the action against the traps said very little in the weeks following the Seaton announcement, preferring to wait until the hearings on the Alaska regulations, revealed the means and method of prohibition, and indicated its vulnerability

Salmon canning companies owning traps established a committee headed by K. C. Hardwicke, general manager, Libby, McNeill & Libby, to plan their course.

The Alaska Fishermen's Union, representing the tendermen and trap employees, prepared to attack the prohibition on the ground that it cannot be considered a legal act under administrative authority limited to the requirements of conservation.

● Whether salmon traps fish in Alaska in 1959 or not, it is obvious that their day is short and that the Alaska salmon industry is face-to-face with the sweeping changes which necessarily will follow. Some of them:

Financial losses by trap owners, not alone in locations but also in inventory which the "sudden death" sentence gives no opportunity to use; and also by suppliers who in November already were manufacturing for the 1959 season.

Boat Build-up over the longer term as fishermen increase the fleet to catch the fish formerly taken by the traps, with a resultant bright, new market for boats and engines, nets and equipment.

Shifting fleet as Puget Sound purse seiners and gillnetters will flock to Alaska to fill the productive void left by the traps.

Resident resistance as the citizens of the new state seek to reserve the resource for themselves.

Enforcement problems as the new state seeks to cope with the difficult task of regulating a fishery on remote and tortuous coastlines where all gear is mobile.

New conflict between types of mobile gear as purse seiners and gillnetters contend for the upper hand.

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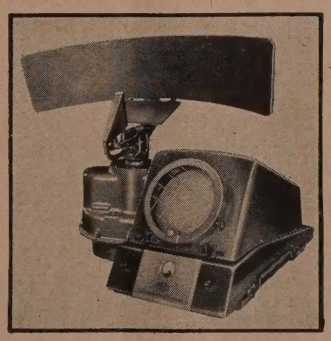

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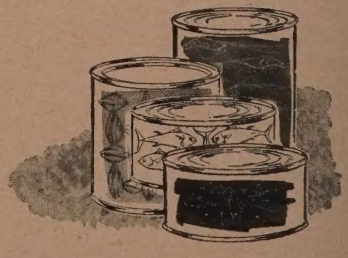

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PACIFIC FISHERMAN December, 1958

Out of Tokyo—

Continued Abstention, with Continued Fishing Pressure On Intermingled Red Salmon

1

Japan's abstention from fishing salmon, halibut, and herring in the eastern North Pacific continues in effect, despite Japan's contention that these stocks do not qualify for abstention under the International North Pacific Fisheries Treaty.

2

Provisional line bounding Japan's salmon fishing on the east remains at 175° West Longitude, despite the United States' contention that Red salmon of North American origin constitute a substantial percentage of this species taken by Japan as far West at 170° East Longitude.

3

National governments were requested to consider the conservation needs of salmon in the high seas area of intermingling in "preparing fishing regulations for future operations"—which could mean anything, from complete closure of 1959 Bristol Bay fishing to Japan's compliance with American requests for cessation of fishing or "equivalent" in the sensitive area of intermingling east of 170° East Longitude.

● Crucial fifth meeting of the International North Pacific Fisheries Commission produced the three concrete results briefed above as it closed in Tokyo November 10 after an overall run of three weeks, the first fortnight of which was devoted to examination of 1958 research results.

Critical character of the meeting arose, first, because under treaty provisions this session offered the first opportunity to re-examine the qualifications of the eastern North Pacific salmon, halibut, and herring stocks for continued abstention; and,

Second, it was the first time Japanese would discuss the United States' proposal for moving the provisional abstention line westward by 15 degrees.

Abstention Impasse

● In Tokyo the North Pacific Commission came to grips with its problem of abstention for the first time. This was because the treaty provided that the qualification of salmon, halibut and herring for abstention should not be questioned nor reviewed during the first five years of the treaty's life. At the meeting in Tokyo three years ago the American Section moved first to prepare the way for this day in 1958 when the matter of whether Japan should continue to abstain from fishing in the eastern Pacific would first come up for consideration. At Seattle two years ago the first arguments in support of abstention were presented. Last year in Vancouver the committee on abstention considered the Japanese rebuttal and passed the matter on to the 1958 meeting for determination.

In Tokyo the cases submitted by Canada and the United States in support of continued abstention by the Japanese came up for critical examination. Japan rejected them as not proving qualification of these stocks for continued abstention. The United States and Canada filed rebuttal to the rejections.

This debate took place in secret, but in reporting on the action taken, or rather the lack of action, which had the effect of continuing abstention, chairman of the Commission Iwao Fujita put the results this way:

"No agreement was reached with respect as to whether these stocks continue to qualify.

The committee on abstention makes no recommendation that the North Pacific Commission report to the governments that any stock no longer qualifies.

"The committee on abstention asks that it be permitted to continue to study this matter; and that a commit-

Looking Back on Tokyo

● Industrial leadership in Japan's fisheries has a clearer concept of the United States' position and feeling in the matter of its Bristol Bay salmon resource than the Government ministries concerned.

Businessmen heading the great fisheries companies are realists, with operations to conduct, products to sell, future supplies to consider. Their understanding of the American point of view and the United States' desire to ease the fishing pressure to which Bristol Bay Red salmon are subjected on the high seas seems much clearer than that of the ministerial spokesmen, as evidenced by the casual official attitude.

Opinions vary as to the extent to which this stiff-necked government position is the result of the 1958 success of industry leaders in dealing with the American request for reduced fishing intensity on stocks of American origin.

This success generated bureaucratic resentment, which may be manifesting itself in today's official unwillingness to take an equally intelligent view of the problem.

Whether Japan's government leaders have a clear concept of the effect on American public opinion and attitude of a closure of Bristol Bay is to be doubted.

That Japan's businessmen leaders of the fishing industry **do** have it seems altogether probable. They are **realists,** successful operators in a rugged, hazardous business.

● In all this one thing is sure: looming behind Japan's attitude is the over-shadowing problem of the coming 1959 fishery conference with the Soviet Union; and the fact that the U.S.S.R., as well as the United States, is manifesting serious concern with the effect of Japan's high seas fishing upon the spawning escapement upon which the future of the resource depends.

---

tee of three scientists, one from each nation, be established to study and clarify the scientific and technological aspects of the cases and critique thereof filed in connection with the question of abstention."

Thus for another year at least Japan will abstain from fishing halibut and herring stocks in the eastern Pacific, and from fishing salmon east of the provisional line at 175° W. longitude.

Progress on the Protocol

● The second of the North Pacific Commission's primary responsibilities has come to be called "the Problem of the Protocol," and deals essentially with how and where division between Asian and North American salmon stocks should be established for the purpose of delineating the areas from which Japan abstains and does not abstain.

Here was the crux of sharpest controversy in the meeting of the Commission.

Days and nights of secret and semi-secret discussion eventually produced five points of agreement. No more. The points were expresssed by the Canadian Section as its views, and were agreed to "in principle" by the United States and Japanese Sections. They were:

1. The annex and the protocol are integral parts of the treaty.
2. There is no doubt that there is a wide area of intermingling of salmon stocks of Asian and North American origin in the mid-Pacific.
3. There is room for doubt that the abstention provisions of the treaty were meant to be absolute. (Editor's note: Meaning and significance of this statement is obscure.)
4. Interest of all three countries signatory to the treaty is in adequate conservation and sound management of the North Pacific fishery resources.
5. Failure to take account of conservation will jeopardize the foundations of the convention.

Governments Called In

● The North Pacific Commission recognized its inability to deal effectively with the immediate problems of conservation by appealing to the governments concerned in these words:

"In view of the results of scientific investigations to date, as contained in the reports of the Committee on Biology and Research, and in accordance with the objective of conservation of fishery resources of the North Pacific Ocean, as expressed in the International Convention for the High Seas Fisheries of the North Pacific Ocean the Ad Hoc Committee on the Protocol recommends that the International North Pacific Fisheries Commission respectfully recommend to the governments of contracting parties that full consideration be given to the conservation needs of these fisheries resources in the area of common concern when preparing fishing regulations for future operations."

It may be asked: "Just what does that mean?"

And the answer must be this: There is no clear indication as to what the framers of this request exactly had in mind. However, there is a strong hint in the closing paragraphs of the final address to the Commission of Milton E. Brooding, spokesman for the American Section, where he said:

> *"With no assurance of the application to the Japanese fishery in* 1959 *of conservation measures, such as cessation of fishing in the areas of intermingling, or the equivalent, the United States faces the prospect of closing down entirely the fishery in Bristol Bay with all the attendant hardships to the communities of Western Alaska, which are almost entirely dependent upon this fishery for their livelihood.*
>
> *"It is obvious that the Bristol Bay Sockeye runs can be exterminated if both of these intensive fisheries — the Japanese High Seas fishery and the United States Inshore fishery—are not adequately regulated. The Commission has been unable to solve this problem of such immediate importance. This causes the United States keen disappointment."*

● For the first time in the five years of the North Pacific Treaty's life the possibility of a great fishery resource being "exterminated" was voiced. Use of the term shows the degree of seriousness which American scientists and administrators attach to the situation resulting from the Japanese High Seas fishery; a situation which has not been corrected even by limiting American fishermen to two days of fishing weekly for an annual season of four and one-half weeks.

Does Japan Realize?

● Frequently during the conference questions were asked in the American camp: "Does Japan realize the seriousness of the situation? Does Japan realize that any further curtailment of American fishing effort in Bristol Bay is tantamount to complete

closure? Does Japan realize that such closure would loose forces of American public opinion?"

These questions were prompted by such casual attitudes as that of Kenjiro Nishimura, Assistant Director, Japan Fisheries Agency, spokesman for the Japanese Section, who said in his closing address: "We should continue further scientific study as well to determine whether the Japanese High Seas fishery has any effect upon the Bristol Bay fishery."

Mr. Nishimura's brief closing statement contained other sigficant remarks. Paying tribute to the scientific researches and the results of their investigations he said: "But our research still is not sufficient to solve the protocol problem. We have little data on the *quantitative* aspect, and the *qualitative* data are still incomplete."

This demand for "quantitative" proof of the presence of American stocks to the westward of the provisional line cropped continually throughout the Japanese defensive case in the three weeks of discussions. Obviously, it is the bulwark of the new defensive strategy of the Japanese Section, which now insists that research should show not only the presence of American salmon west of the provisional line, but how many salmon are there; and where they are at what times and in what proportion of the total population in the zone of intermingling.

His closing sentence had a particularly suggestive note to observant Americans for he said: "Japan will continue its contribution to conservation."

These few words take on particular significance in view of Japan's declaration in the protocol debate that by abstaining from fishing salmon east of 175° W. longitude it was making full contribution to the conservation of this resource in the North Pacific, and could not be expected to exercise further restrictions in the cause of conservation westward of that line.

No 12-Mile Limit Talk

Not one word about the 12-mile limit was heard during the Tokyo meeting, although the matter was obviously in the background and in the thinking of several of the commissioners and their advisors.

The subject was omitted from all discussions, even including those of purely hotel lobby character, by tacit agreement, Canada being an advocate of extension of jurisdiction over fisheries to 12 miles, while the United States and Japan hold to the doctrine of a narrow territorial sea for all purposes, including fisheries as well as security.

"More Equitably Divide"— What Does it Mean?

● One of the "stickiest" questions confronting the Commission is the definition of these apparently simple words which are in a measure the key to the protocol of the treaty, the all important question of how to achieve the best and "more equitably" to apply separation of the stocks of Asian and North American origin in the high seas. Definition of the term was insisted upon by Japan at the interim protocol committee meeting held in August of this year in Honolulu. At the Tokyo meeting Canada reserved expression of its definition until a later date. Japan and the United States submitted their ideas.

Japan contended that the treaty when it directs that the Commission shall determine a line or lines which "best divide salmon of Asiatic origin and salmon of Canadian and United States origin" means that the Commission each year on the basis of its research data should establish a line which would divide *equally* in numbers the salmon of both continental origins in the zone of intermingling. In short, the Japanese were proposing a line which would separate the salmon of the sea, without regard to their origin, into two equal groups. Obviously, with the American Red salmon tending to range far to the west and the Asian Pink and Chum salmon, with their large numbers, tending to range well to the east, the bargain would be a good one from the Japanese point of view, particularly as the United States and Canadian fishermen do not fish salmon on the high seas.

The American definition contemplated as the line which would "more equitably divide" the intermingled stocks, one to the east of which would lie the greatest possible proportion of salmon of North American origin, while to the west would be the greatest possible proportion of salmon of Asian origin.

Allen Elected Chairman; 1959 Meeting in Seattle

● Edward W. Allen of Seattle was elected chairman of the Commission for the ensuing year. George R. Clark of Canada became vice-chairman and Iwao Fujita of Japan was elected secretary.

The next meeting will be held in Seattle with the plenary sessions opening November 2, 1959. Meetings of the Biology and Research Committee will start two weeks earlier. The Canadian Section at the Tokyo meeting included Mr. Clark, John M. Buchanan, James C. Cameron and Roger T. Hager, with these advisors and experts: Dr. A. W. H. Needler, Dr. W. M. Sprules, Dr. F. Neave, Dr. M. P. Shepard, Dr. K. S. Ketchen, Dr. L. Margolis, A. J. Dodimead, F. H. C. Taylor, D. B. DeLury, R. Duer.

The Japanese Section included Mr. Fujita, Haruki Mori, Kenjiro Nishimura, Kuyhei Suzki, with advisors Hideo Okuhara, Shrinkichi Katayanagi, Kenkichi Nakabe, Koichiro Kobayashi, and 47 experts.

The American Commission consisted of Mr. Allen, Milton E. Brooding, John H. Clawson, and Arnie J. Suomela, the latter having just been appointed to the Commission succeeding Assistant Secretary of the Interior Ross L. Leffler. The American Commissioners were served by advisors C. E. Atkinson, F. C. Cleaver, R. A. Fredin, W. C. Herrington, D. L. McKernan, L. Nakatsu, Dr. W. F. Royce, R. P. Silliman, W. M. Terry, Dr. W. F. Thompson, and W. G. Van Campen. Members of the American Committee present included C. L. Anderson, A. M. Day, DeWitt Gilbert, R. C. Kallenberg, H. E. Lokken, Milo Moore, J. W. Smith, Lowell Wakefield.

The Union of Soviet Socialist Republics was represented by three observers, A. A. Volkov of Moskow; Dr. R. S. Semko of Petropavlofk, Kamchatka, and B. Proskuriakov, interpreter.

Some sharp criticism was heard in American quarters over the policy which excluded from plenary sessions of the Commission American business men and journalists who had travelled to Tokyo for the meeting, while admitting observers whose nation was not even a party to the convention; and of providing them with reports and documents which were not distributed to advisors of the Canadian, Japanese and United States Sections.

International North Pacific Fisheries Conference Report Continued on Page 33.

Tuna and Sardine Packs in So. California Break Records

The record books on the Southern California fisheries took a terrible beating last month when the figures were totaled up for the first ten months of 1958.

According to the Market News Service of the Bureau of Commercial Fisheries, the San Pedro tuna pack for the first ten months of 1958 was 9,810,000 cases—more than any full year in the past. The biggest entire year up to now was 1956, when 9,600,000 cases of tuna were packed, the Bureau said.

The entire year's pack for 1958, the Bureau estimated, would come to 11,000,000 cases or over.

Earlier in the year, with a recession troubling many areas of the U. S., and with meat prices orbiting into outer space, tuna sales also broke records. Not so this fall. October and November sales, according to well-informed sources, were quite disappointing.

The reason for the softening up of the market seemed clear to educated observers. Meat prices are now more nearly within reason, and competition from that quarter is cutting into tuna sales. Employment is up, housewives have more money to spend on the household budget, and they are turning from economical canned fish to costly beef, pork and lamb.

Sales are expected to pick up after the first of the year.

Sardine Season Tapering Off

One big San Pedro cannery ceased to accept sardines in mid-November, possibly heralding the gradual end of the biggest sardine season since 1951.

Up to November 17, when the fleet tied up because of brutal weather outside, the San Pedro-Long Beach catch, reported by the Market News Service, totaled 64,939 tons, as compared to 2947 tons last year. The total California catch, including Monterey and San Francisco, was 85,050 tons; last year, 12,950.

There again, however, sales were not breaking records to match the catch. After the big early-season catches filled the market supply-lines, the demand failed to keep up with the record-breaking supply.

All observers without exception pointed out that the export markets for sardines—mainly the Philippine Islands—have been pre-empted by Japanese and South African canners during the lean years when California fishermen almost forgot what a sardine looked like. Now that sardines are again being caught in California waters, retail prices in the export markets are so low that U. S. canners find it hard or impossible to compete.

Meal Moving

Sales of fish meal had improved substantially over the early season. Prices for standard meal, 60% protein at Monterey and Los Angeles were up to $135 a ton from previous contracts at $126, the Market News Service said. At the $135 price, supplies were light, demand good, market firm.

Whether the sardine season was definitely drawing to a close remains to be seen at this writing. The approaching light of the moon will tie the fleet up anyway for a few days; and when fishing resumes in the December dark, there may be a market for fish at a lower price than the $50 a ton current at this time. On the other hand, canners may be in no position to accept more sardines at any price.

In San Pedro, John Fitch, marine biologist, identified the creatures as mobula. Mobula, Fitch said, feed on sardines; so sardine fishemen needn't be surprised to find a ton or two of mobula in among their sardine catches.

Big Sardine Pack

The California sardine pack for 1958 from August 1, beginning of the season, to October 31, was 1,775,000 cases, biggest since 1951. The 1957 pack, by contrast, was 497,700 cases.

The big 1958 pack reflected the changed oceanic conditions which have made this an extraordinary year in many respects.

The sardines caught during October and November, like those earlier in the year, were mostly found off Santa Cruz and Santa Rosa islands. The fish were of a fair size, not large, but not as small as those brought in at the beginning of the season.

Big Season for Seiners

San Pedro purse seine fishermen had the best season in many years, especially with Bluefin. The net boats caught 15,134 tons of Bluefin between January and November 8, as compared with 9,725 in 1957. This brought the total crop of the seiners, all species, to 38,934 tons, more than 10,000 tons over the 1957 total.

The seiners did all right on other species too, catching 2117 tons of Bonito and 19,644 tons of Yellowtail for the period. The Skipjack catch fell off to 2039 tons from 3063 in 1957.

Bait boats held about even, wth a total catch of 86,572 tons, and Albacore boats landed less tonnage in California than last year (12,589 as against 18,355), but the Albacore landed in Oregon ports by California-based boats brought the grand total up about even this year with last.

No less than six San Diego-based clippers were fishing in Oregon and Washington waters for Albacore last summer.

Imports Up

Imports of Japanese tuna were 'way up, totaling 62,541 tons for the State total, as reported by the Market News Service, an increase of 16,040 tons over 1957. The period covered is January 1-November 8.

Albacore and Skipjack imports were less this year than last, but Yellowfin imports more than doubled, from 19,599 for the 1957 period to 40,872 for the corresponding portion of 1958.

Fishermen and most canners were united in voicing alarm at the resumption and increase in imports of frozen loins from Japan. But there was little prospect of any action to try to pur-

Southern California Domestic Tuna Deliveries

Cumulative totals for 1958 through Nov. 15, in tons, as reported by U. S. Market News Service

	Albacore	Bluefin	Skipjack	Yellowfin	Bonito, etc.	Total
Clippers and Albacore Fleet	12,606	26	49,905	37,644	33	100,214
Purse Seiners		15,134	2,039	19,646	2,128	38,947
Total 1958 through Nov. 15	12,606	15,160	51,944	57,290	2,161	139,161
Total 1957	18,565	9,725	41,001	65,815	24	135,130
Total 1956	16,650	6,142	51,481	72,125	47	146,445

Southern California Receipts

	Albacore	Bluefin	Skipjack	Yellowfin	Bonito, etc.	Total
San Pedro	15,458	13,628	33,780	69,611	1,762	134,239
San Diego	6,225	1,877	30,786	23,624	404	62,916
Total 1958 through Nov. 15	21,683	15,505	64,566	93,235	2,166	197,155
Total 1957	32,783	9,725	49,606	80,499	50	172,663
Total 1956	22,504	6,222	58,018	90,407	49	177,200

suade Congress to pass remedial legislation at the next session.

One cannery spokesman said that the matter of importing loins was one point on which virtually every canner, and every fisherman, holds the same view—all are against it.

But, while all but a few canners feel the same way on importing loins, most hesitate to act together on the issue, for good sound legal reasons. And the fishermen, who last year took the lead in lobbying for a tariff to control all imports of fish, are at the moment not anxious to undertake another long, costly battle in Washington.

Cannery Receipts Set Record

Receipts of fish for canning also set a new record this year. From the beginning of the year up to the end of October, the San Pedro total as reported by the Market News Service was 201,000 tons, which beats every entire year except 1956. The 1958 figure is the all-itme high for ten months and is 22,848 tons over the second high, 1956—a 12% margin.

Washington Tuna Packers Form New Conference

A new organization of tuna canners in Washington state was formed recently, to work on problems of joint advertising and public relations, and act with comparable groups. It elected R. E. Silver, of Whiz Fish Products Co., as its chairman.

To be known as the Conference of Washington State Tuna Packers, the body was formed for several reasons, according to Silver, who commented, "We are small processors individually but collectively we account for half a million running cases a year."

Directors are Robert J. Breskovitch, Pacific Reefer Fisheries; I. L. Waring, Crown Packers, Inc.; Leo Kite, West Coast Fish Co.; E. B. McGovern of McGovern & McGovern; Charles D. Alhadeff, Rainier Pacific Fisheries Co.; James A. Edington, Fan-Sea Foods, Inc.; and Jack William Fleck, Pacific Seafoods Packing Co.

The similarly independent Oregon tuna packers of common interests would be encouraged to participate in this group, according to Silver.

Townsend Studies Menhaden

James R. Townsend, San Francisco fisheries consultant, has returned from a month's trip, visiting the menhaden plants on the East and Gulf coasts.

Mr. Townsend reports that fishermen there are experimenting with lampara nets, which would allow smaller crews on boats and the use of smaller boats.

Central California Sardine, Mackerel Catch Not too Good

The total California catch of sardines fell off drastically in November due to rough weather, and reported lack of interest of canners in buying fish.

Boats had been put on limits by Monterey canners for most of the season, since only so much tonnage could be handled for canning, because surplus fish could not be turned into fish meal and oil economically.

Of the total catch of 17,831 tons of fish brought to Monterey Bay area plants to Nov. 18, only about 20 ro 25% was taken in Monterey Bay or near Monterey. The rest of the fish, including 2,280 tons brought to San Francisco, was trucked in from southern California points.

As of the middle of November sardines were selling $8.00 for ovals, in tomato sauce, and $6.00 for talls, natural. The season had opened with quotations of $9.00-9.25 for ovals, and talls, $7.25-7.00. Part of the decline in price was due to reduction in price paid to fishermen from $60 per ton at the opening of the season to $50 per ton, effective Oct. 6. Part of the drop was also due to revision of canner's costs and overhead bcause of the larger production.

The export market was characterized by San Francisco's California street observers as: "lacklustre—mediocre—little interest." This was attributed to competition from South African and Japanese sardines, and the high price of California canned fish.

At the middle of November central California canners appeared to be less anxious to sell, as fish were scarcer, and it was thought that the market could strengthen.

There was little carry-over of canned sardines from the 1957 season, and what there was was in second hands and was selling for as high as $11 per case for ovals. Very few talls were available, and what there were were selling for around $7.25.

By June the carry-over was cleaned out. Market action was reported to be good at these high prices, and weakness in the market didn't appear until it was apparent that early 1958 catches were going to be bigger than in many years previously.

The mackerel fishery has been poor since October, 1957. It was reported that only about 200 cases of jack and Pacific mackerel were packed by central California canneries. The prevailing price was $7.00 per case for jack mackerel, and $7.50 for Pacific mackerel.

Robert E. Walker Retires After Many Years of Service

Continued ill health has forced the retirement of Robert E. Walker from the presidency of British Columbia Packers, Ltd., Vancouver, B. C. John M. Buchanan has resumed that office as well as continuing as chairman of the board.

For many years Bob Walker has been a dominant and extremely active figure in the fishing industry, and he played an influential role in B. C. Packers' spectacular expansion during the past decade.

As a boy he spent several vacations working in the fish business, but not until 1917 did he take a regular job in it, as tallyman at the Imperial cannery, now one of the key plants in the B. C. Packers' organization and one of the biggest in the world.

In 1925, Bob Walker joined the old Gosse-Millard Packing Co., later absorbed by B. C. Packers, and stayed with them until 1926. The next two years he spent as plant manager at Great Northern cannery and he remained with the company after it was also taken over by B. C. Packers until 1931 when financial difficulties resulted in complete reorganization.

Mr. Walker then went into partnership with W. H. Edmunds and organized Edmunds & Walker, eventually to become, with Canadian Fishing Co. and Canadian Fish & Cold Storage Co., one of the "Big Three" in B. C.'s fresh fish trade. Meanwhile H. R. MacMillan, later assisted by John Buchanan, was building a new corporation out of the wreckage of the old BCP organization, and by 1939 the new B. C. Packers, looking for an opportunity to expand into the fresh fish business, acquired Edmunds & Walker. Mr. Walker stayed with the company. When the fast-growing B. C. Packers created the office of production manager Bob Walker was the obvious candidate. A few years later he became vice-president in charge of production and in July, 1956, was promoted to the presidency.

Mr. Walker has been an active member of the Fisheries Research Board of Canada for many years.

SALMON CANNERS' OFFICERS—Front row, from the left: **Herald O'Neill,** executive secretary; **A. W. Brindle,** president; **Aubin R. Barthold,** vice president; **Vance Sutter,** past president; **S. G. Tarrant,** vice president; **S. M. Rosenberg,** vice president. . . . Rear row: **J. E. Brennan, August Buschmann, William Calvert, K. C. Hardwicke, H. B. Friele, John N. Plancich,** trustees; **T. F. Sandoz,** vice president; **G. P. Halferty,** trustee; **M. E. Brooding,** chairman, American Section, International North Pacific Fisheries Commission.

SERIOUS SALMON CANNERS STUDY:

Implications of Statehood; and High Pressure High Seas Fishing

● Implications of statehood, with its certain switch of authority over Alaska fisheries to the new state, shared with the International North Pacific Fisheries conference in Tokyo the top spot in the thinking of the Association of Pacific Fisheries convention held at Ojai Valley, California, late in November. Both were serious subjects, seriously scrutinized.

W. C. Arnold, managing director of Alaska Salmon Industry, Inc., told the salmon canners that they must expect and be alert to sweeping changes in virtually all aspects of Alaska salmon operations as control over the fisheries is surrendered to the state by the federal Department of the Interior.

It was his thinking that the only certainty was that all rules of the game, and the thinking, philosophy and purpose behind them, would change sweepingly; and that the industry, as a group and as individuals, must be alert to change with change.

He saw no profit in head-in-the-sand ostrich tactics, nor in the they-can't-do-that-to-me position; no profit, nor any prospect save defeat.

● Calling for "an alerted industry" to impress governmental agencies with its anxiety over the necessity for negotiations with Japan which will serve to ease the intensity of exploitation of the Brisol Bay Red salmon runs on the high seas, Milton E. Brooding, chairman of the American Section of the International North Pacific Fisheries Commission, reviewed the annual conference which closed in Tokyo November 10.

His review followed closely the detailed report of the meeting appearing elsewhere in this issue, and he went further to point-up some significant conclusions in these words:

"Our present evidence only substantiates the fact that Bristol Bay Reds are significantly involved in the area of intermingly. Unless some accommodation can be reached, Bristol Bay stocks of Red salmon appear subject to destruction by the Japanese high seas fishery.

"It is evident that the Japanese expect to share in fish of North American origin west of the provisional line and that, by staying west of the line, they have made their maximum contribution to high seas conservation.

"As a nation, it is abhorrent to the Japanese to think of any restrictions to fishing on the high seas. At the Geneva conference they so stated, and their every action is in this direction."

● A. W. Brindle of the Wards Cove Packing Co. was re-elected president of the salmon canners' association, with vice presidents in order: A. R. Bartold, Alaska Packers Association; T. F. Sandoz, Columbia River Packers Association; S. M. Rosenberg, New England Fish Co.; S. G. Tarrant, Pacific American Fisheries.

Herald O'Neill was re-elected executive secretary.

Two new trustees were chosen, William Calvert of the San Juan Fishing & Packing Co., succeeding his brother, Lawrence Calvert; and J. J. Lind, Alaska Year Round Canneries Co., succeeding C. J. Sebastian of Sebastian-Stuart Fish Co.

Other members of the board are: Charles D. Alhadeff, Whiz Fish Products Co.; Nick Bez, P. E. Harris Co.; J. E. Brennan, Haines Packing Co.; August Buschmann; H. B. Friele, Nakat Packing Corporation; K. C. Hardwicke, Libby, McNeill & Libby; Guy P. Halferty, Pioneer Packing Co.; William S. Jensen, Washington Fish & Oyster Co.; Leo T. Kreielsheimer, Ka-

diak Fisheries Co.; Vance S. Sutter, Fidalgo Island Packing Co.; John Plancich, Fishermen's Packing Corporation.

E. E. Murray again distributed the golf prizes in the Murray manner; and Maurice Nelson of the National Caners Association managed the golf tournament.

● There are younger names than usual on the three golf trophies of the Association of Pacific Fisheries, for it was a case of "youth will be served" at the Ojai tournament.

The Miller Freeman Trophy was won by Ray Wood of Petersburg Sea Foods. The Jack Horner Trophy will bear the name of Harold Heaton of Whitney Co.; and the Cres Hales Memorial Trophy was won by Robin Welsh of Bellingham Canning Co.

Other golf prize winners, their trophies and the donors were:

Sam Rubinstein, Whitney & Co., a luggage set from Tubbs Cordage Co.; Homer Kyros, Artic Maid Fisheries, a wall barometer from Plymouth Cordage Co.; Justin Strom, Western Fisheries, a desk ships clock from E. H. Edwards Co.;

Wilmot Lilly Jr., P. E. Harris Co., a flyrod from the Bank of California; John Plancich of the Fishermen's Packing Corporation, a transistor radio from Standard Oil Co. of California; Robert Ennis of Parks Canning Co., a carving set from Johnson & Higgins.

Two bottles of champagne each, for high net, three divisions, were won by R. Bell-Irving, Fidalgo Island Packing Co.; Eric Bulmer, Ouzinkie Packing Co.; and Harold Brindle, Wards Cove Packing Co.

A dozen golf balls each, from the Association of Pacific Fisheries and the Northwest Branch of the National Canners Association went to S. E. Stretton of Standard Oil Co.; Ralph Johanson of Pan American Airways; Mel McKinstry of Alaska Steamship Co.; and Dan Small of Continental Can Co.

TH' WINNAHS!—Gene Murray, perennial M.C., introduces the trophy winners at the Association of Pacific Fisheries Golf Tournament. On the left, **Ray Wood** holds the Miller Freeman Trophy. **Robin Welsh,** in the middle, won the **Jack Horner** Trophy; and **Harold Heaton** earned the **Cres P. Hale** Memorial Trophy.

Registration prizes, winners and donors were:

Mrs. Harold Heaton, binoculars from Pacific Marine Supply Co.; J. C. Irvine, P. E. Harris Co., a radio from Salmon Terminals, Inc.; Mrs. A. L. Rodgers of Petersburg Processors, ice chest from Nordby Supply Co.;

Steig Osman, Pacific American Fisheries, clock from Seattle-First National Bank; Mrs. Osman, a travelling bag from The Linen Thread Co.; Mrs. T. F. Sandoz, Columbia River Packers Association, a wrist watch from National Bank of Commerce; Ralph Hendrickson of the same company, a portable television set from Seattle Marine & Fishing Supply Co.

● The Ojai convention was notable as the first in a long while which has been held away from Seattle, and as a renewal of the golf tournament of long-standing tradition.

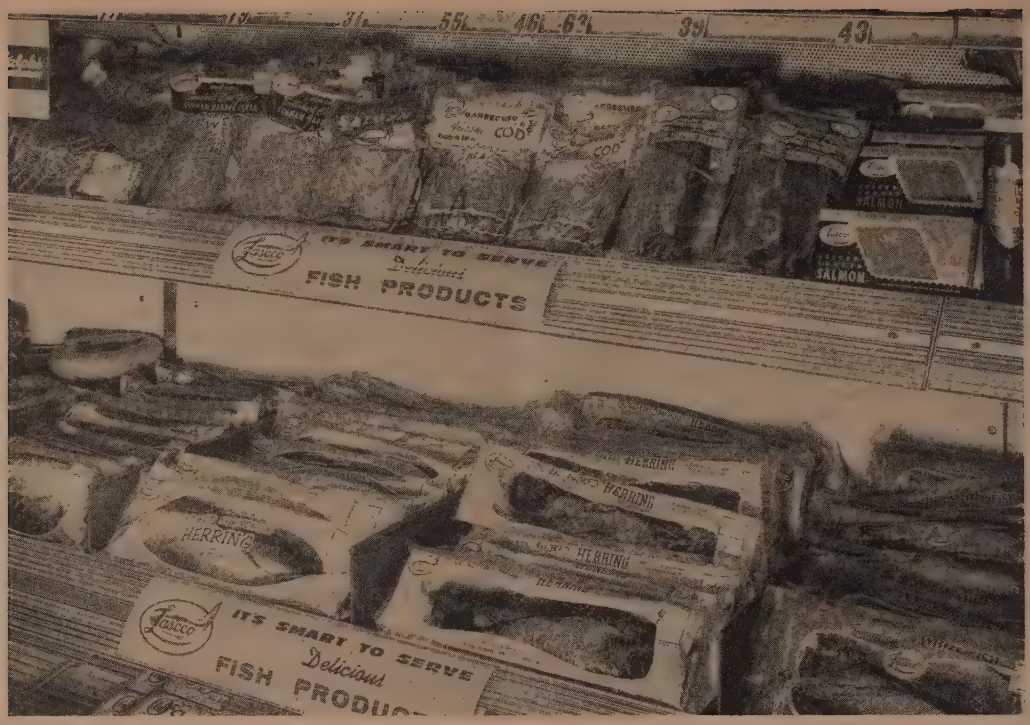
Northwest Fisheries Assn. Elects Dignon President

Robert E. Dignon of the Northern Products Corporation was elected president of the Northwest Fisheries Association November 19. William Eardley, Jr, was outgoing president.

Other officers elected included Stephen L. Chase, Everett Fish Co., vice-president; B. E. Gilmna, Vita Food Products, Inc., secretary; Douglas Hager, New England Fish Co., treasurer; and three trustees, Martin Kihara, Main Fish Co.; Ike Alhadeff, Whiz Fish Products Co., and Walter Johnson, Halibut Producers Co-operative.

The meeting was highlighted by a report by Milo Moore, Director of the State of Washington Department of Fisheries, on his recent trip to the Orient and discussions with representatives of Pacific nations regarding the future of the fishing industry in that area.

SALMON CANNERS, in convention at Ojai, Calif., give serious attention while **Milton E. Brooding** reviews the high seas fishing situation in the North Pacific as it stood following the international conference in Tokyo.



LASSCO Products in film of several soprts for excluding air, retaining brine, to prevent oil leakage, dehydration and contamination; and to permit cooking in the sealed bag—all commanding the most valuable sales space in a great supermarket of Los Angeles' Ralph's chain.

The SECRET of LASSCO

Mildness, and Strict Control of Temperature and Humidity

"We started out 37 years ago to produce a complete line of top-quality smoked, cured, pickled fish —and right away we ran into trouble.

"We found that in Southern California there are conditions of climate, temperature and humidity that are different from other parts of the country. You can't depend on uncontrolled temperatures and humidities to give you a top-quality cure.

"So Los Angeles Smoking & Curing Co. became the first in the smoked and cured fish industry to use strictly controlled temperatures and humidities in our processes.

"We had the first controlled-temperature cure room and the first controlled-temperature dry room. We were also the first to put in a lot of other innovations in this business."

The speaker was Louis Vitale, president of Los Angeles Smoking & Curing Co., West's largest processor of smoked, cured fish. He was explaining how LASSCO has helped to make smoked and cured fish a staple in Southern California supermarkets and restaurants—and how LASSCO products have managed to take over so much yardage in supermarket deli refrigerator cases.

A Staple Specialty

Southern California is one of the few parts of the United States where smoked and cured fish items have become staples rather than specialties, as a quick check of supermarket deli cases will show. And LASSCO with its long line (35 or more items), its high quality and aggressive selling, is largely responsible for this wide acceptance of a specialty line.

The firm and the customers' tastes have grown up side by side. As Mr. Vitale says, "We formed the firm around the city and its tastes—but we also helped to form the city's tastes around LASSCO products.

"Early in the game we found that people—the great majority of people —generally like mild-cured fish items. Because of the heavy influx of foreign-group populations into Southern California, we went into products they liked, such as smoked Eastern whitefish, lake chubs, etc., in addition to our bread-and-butter products like smoked salmon.

"But we modified these foods to give them a wider appeal than just to national groups. We succeeded in developing products to suit all tastes. Without driving away our old-country customers, we won over a lot of new customers by giving them milder flavors.

"Now our people have gotten used

LOUIS VITALE

The man who made LASSCO and gave America a new respect for cured fish products.

to LASSCO products, and the trade today actually prefers a milder product for general sale.

"Of course, there has been a trend toward milder flavors in all foods, and this also helped our business."

"LASSCO Cure"

"We use what we call the LASSCO cure—a mild cure resulting in a lighter product. We use sugar as well as salt and other ingredients in our brine.

"We stick to the old-fashioned method of cooking brine together with the spices—and we use whole spices. Then we give the brine a quick chill to bring it down to a temperature equalized with the temperature of the fish.

"LASSCO pioneered temperature control in the drying room and the curing room. In the drying room, we freeze the incoming air to dehydrate it, then warm it to the temperature required. Drying period is around four or five hours.

Electrostatic Smoking

"LASSCO was the first to use the electrostatic smoking oven. In fact, we helped Leo Benoit, the inventor, develop the machine. The electrostatic smoker gives us a lighter smoke; it just flavors the fish, doesn't coat it with smoke, and so the flavor of the salmon is retained.

"We also use conventional oven smoking, to make a sharper, stronger product, and it is a popular item. We use a blend of imported sawdust with domestic hardwood sawdust in both the electrostatic machine and the conventional ovens."

Basically, the electrostatic smoker is simple, but like so many simple devices it is complicated in detail and operation. It consists of a shallow, wide tunnel with a conveyor moving through it, and with electric burn-

1. Evacuating air from film pouches of smoke-cured fish, followed by inert gas and sealing.

2. Bagging cured fish for evacuation and closing in background.

3. Slicing smoked salmon for packaging in film, glass or metal containers.

4. Smoking sides of cured salmon in LASSCO's exclusive electrostatic smoker.

Protective Pouches of impermeable films are among the most useful devices in Louis Vitale's bag of tricks. LASSCo was one of the first fish packers to adopt films which permit cooking in the bag, selling fish in brine, and protecting delicacies by replacing air with inert gas.

ers inside. Heavy rubberized curtains at each end make a closed chamber into which whole, cured fish are loaded at the intake end, to be removed at the delivery end. The smoking period is controlled by the speed of the conveyor moving through the tunnel.

New Products, New Lines

For the sake of production economy and uniform quality, LASSCO mangement strives to mechanize as much as possible. It is true, however, that with so many products in the line, and with so many operations that just can't be mechanized, there is a limit.

In recent months, LASSCO has substantially remodeled its plant and put in new lines for vacuum-bag packing in film bags; for packing smoked salmon in tins and film; and for automatic glass packing of sour cream herring fillets and wine herring snacks.

LASSCO has thereby become the first to use automatic vacuum packing for cured fish products, and the first to use a mechanical filler for herring fillets in sour cream.

How It's Done

The sour cream herring fillets and wine herring snacks, both packed in glass, are handled on two lines laid out together in one area, both lines converging at the jar-washing station just before the jars are packed in cartons.

Herring are first cut on two automatic circular-blade cutters made by Emil Rivers, Rockland, Maine. They are toted to the filling line in stainless steel containers.

Sour cream and herring are combined in an overhead hopper of about 100 gals. capacity and are there gently stirred by a slow-speed electrically driven agitator. The right amount of product is delivered automatically into each jar as it passes under the filler nozzle; but because the product comes in chunks, each jar is check-weighed after filling, and an extra chunk is added by hand to underweight jars.

Jar tops are affixed by rotating Elgin screw cappers. The sour-cream blender was made by Grace Machinery Co., Oakland, California, and the filling machine is an Elgin. This, Mr. Vitale says, is the only automatic filler made for herring fillets and sour cream together—quite an achievement when you consider that the product is chunky and hard to handle, and delicate so it must not be roughly handled.

The result of blending before filling rather than putting the sour cream and fish separately into the jar, is a uniform product. The fish is uniformly coated with sour cream. When the consumer opens the jar, she finds that the last chunk she takes from the bottom is just exactly like the first one off the top.

Efficient Line Layout

The converging layout of the glass lines makes for efficiency and flexibility. The cutting machines can be used for either product or both, as required, and all the equipment on both lines, or on either one, can be put on either or both products.

Wine snacks are hand-placed in the jars, like fine green olives, in a pattern that makes an attractive glass pack, so the wine snack line is longer than the sour cream line, with several hand-packing stations along the conveyor. The sour cream line moves at right angles to the wine snacks, making a right turn and joining the line after capping.

Mr. Vitale says the glass lines are to be further mechanized by installing automatic supply of empty jars to the line, and other refinements.

No labels are used on any LASSCO jars. The only identification is on the lithographed caps, supplied by Phoenix Metal Cap Co. Unlabeled, the product sells itself through its own eye-appeal. Jars are supplied by Hazel Atlas and A. H. Kerr.

Vacuum Bag Packing

LASSCO was one of the first smoked fish producers to vacuum-pack in film bags, and the first to develop cook-in-the-bag packages on certain products adaptable to that kind of handling, like finnan haddie. The vacuum-bag packing line is one of the new improvements in the plant.

A packing rate of about 60 per minute is achieved by the present vacuum line with two closers running. Fish are hand-placed in bags made of Mylar laminated with other films, and reach the machine operator on a conveyor. One operator runs both machines, which work on an alternating cycle, so she keeps busy alternating putting one filled bag on No. 1 machine then taking a sealed bag off No. 2.

The vacuum machines, made by Flex-Vac division of Standard Packaging Corp., exhaust the air from the bag and add a quantity of inert

gas. The result is a product that will keep for a long time, in a film that is tough enough to stand a lot of rough handling, yet transparent so as to give the customer a clear view of the product inside. Film bags are supplied by Standard Packing Corporation, Millpint Inc., The Dobeckmun Co. and the U. S. Packaging Corporation of New Jersey.

Cook-in-the-bag products have made a hit with housewives because they are convenient, clean, save time and eliminate mess. They are a real convenience food, right in step with today's trend toward time-saving, work-saving, non-fuss meals.

Vacuum-Canned Salmon

Another piece of LASSCO pioneering was the first vacuum-packed canned smoked salmon, first produced several years ago and still a leading item. The cans are one-pound ovals, which are hand-filled with salmon sliced on four U.S. Slicing Machine Co. slicers. The cans are exhausted in conventional style, then closed on two American Can Co. machines.

The same line, all stainless steel, is used for packing institutional-size smoked salmon in five-pound tins with pressure lids, and for packing one of LASSCO's most popular items, a three-ounce vacuum package of sliced smoked salmon in film enclosed in a paperboard folder with a window. In this package, the succulent pink salmon shows through the transparent film window to stir the shopper's appetite and make a quick impulse sale. Vacuum packing is done on the Flex-Vac machines.

All packages on the new line are check-weighed on three Exact-Weight over-and-under scales.

Wood to Metal

Speaking of institutional sizes, LASSCO was among the first to get away from wooden kegs as bulk containers for cured fish. This was done 20-odd years ago, with the help of American Can Co. which developed a special lacquered can for pickled and salt fish. Today this can has been further improved by using a lithograph design on the outside.

LASSCO was established in 1921 by Mr. Vitale and Frank Tarantino, who died several years ago. The first plant was outgrown in a few years, and the present building, which has been expanded and improved several times, has been occupied since 1929.

"All the way, we have stuck to our field, which is fish delicatessen items", Mr. Vitale said. "We have never gone into allied fish items, like frozen fish, nor into allied deli items, like meats. We are the only fish house in the West with a complete exclusive line of fish deli items.

Filling the Film bag with brine and thus modernizing the merchandising of one of the fish world's oldest products—salt herring.

"We have spent considerable time, money and effort on packaging; have counseled with engineers and designers, and now we have a family design, with color variations for different products.

"Most of our sales are in the 11 Western states, but we sell some of our products in the East, and export our entire line to Mexico, the Philippines, and Hawaii."

Mr. Vitale is a national industry leader, past president of the Southern California Fisheries Assn., long-time member and committee chairman of the National Fisheries Institute, well known to everybody in the fish business, a ready speaker, a popular personality and a crackerjack salesman. A gourmet and a fine cook, he is just as interested in food away from his office as he is while at work.

Alaska Packers Assn. To Install Cannery for Shrimp on Kodiak I.

Alaska Packers Association announced at the end of November that they are adding a shrimp packing operation to their salmon canning facilities at their Larsen Bay cannery on Kodiak Island. The installation will include four shrimp Peelers machines.

It is anticipated that the shrimp canning facility will be in operation in the shrimp of 1959.

Electric Fence Diverts Stragglers from Adams

Unusual measures were adopted early in November to prevent excessive escapement of Sockeye salmon into the Adams River when an electric fence was installed at the direction of the International Pacific Salmon Fisheries Commission.

It was the first application of this type of deterrent on a major scale in the Fraser River system and, according to the commission staff, it worked perfectly. Not a single fish passed the river mouth after the fence was set in place.

The commission reached its decision, subject to approval of the Canadian fisheries department, to divert upstream migrants after an escapement of about 1,750,000 top quality spawners had been obtained, with inferior stragglers still heading up the river.

Roesling Buys Controlling Shares in F. E. Booth

Ralph J. Roesling, San Francisco, one of the developers and leaders of the California sardine reduction business, and for some years a director of F. E. Booth Co., Inc., pioneer California fish, fruit and vegetable canning firm, has acquired control of Booth.

Mr. Roesling now owns about 70 per cent of both preferred and common shares, after buying the holdings of Harry M. Fair Sr., and his family.

No present plans for changing the Booth operation in any way are contemplated, Mr. Roesling said. A. H. Mendonca has been president of the company for many years; Al Desmond is vice-president and general sales manager, and Mr. Roesling will become chairman of the Booth board.

F. E. Booth Co. Inc., packs sardines, jack and Pacific mackerel and cat food at its Long Beach plant, tuna in San Francisco, and fruits and vegetables in Centerville.

B. C. Herring Abundance Amazes Forecasters

British Columbia herring upset all scientific calculations by swarming into the Gulf of Georgia in enormous volume, to the consternation of scientists who had predicted a modest run and to the delight of fishermen and processors.

It was just another demonstration of B. C.'s Centennial bonanza in fisheries, most impressively apparent in the Sockeye run a few weeks earlier.

The fisheries department had barely established the quota of 40,000 tons for the lower east coast area when it was filled, and so on October 31 A. J. Whitmore, director for the Pacific area, gave notice of revision of the regulations extending the quota to 50,000 tons. Only 43 hours of fishing were required to reach the additional total.

Individual catches ranged all the way up to 400 tons each, with several in the 200-ton bracket. The fishery was particularly active in the Departure Bay-Nanoose Bay area along the east coast of Vancouver Island.

The staff of the Pacific Biological Station of the Fisheries Research Board concurred in the extension of the quota, but they were frankly amazed by the plentiful supplies of herring.

Forecasts made by the station's staff are derived from prediction of the carryover from the estimated population abundance in the previous season and the expected new recruitment. Three important assumptions are involved:

1. That age composition of the fishing and spawning runs represents that of the whole population.

2. That the extent and intensity of spawn deposition is proportional to the size of the spawning population.

3. That the proportion of young fish in the runs gives an approximate indication of the amount of recruitment to be expected.

Analyzing the prospects for the lower east coast area, the station's report written by Dr. F. H. C. Taylor pointed to the small catch resulting from the strike in the winter of 1957-58, and pointed out that despite this condition the spawn deposition in 1958 showed no corresponding increase, but was about the same as in the preecding two years. "It would therefore appear that the level of abundance was sharply down," the report concluded.

However, since the herring evidently didn't know what was expected of them, they upset all the dope and appeared in almost fantastic volume. "I've been fishing on this coast 35 years and I've never seen anything like it," said Capt. Charles Clarke of Nelson Bros. Fisheries.

About ten processing plants were active in herring this season, nearly the same as in 1957-58. Not all of them, of course, shared in the big lower east coast catch.

POFI Scientists Prove Sardines Like Hawaii

Scientists of the Pacific Oceanic Fisheries Investigations see some evidence that Marquesas sardines planted in Hawaiian waters like their new home and have begun to spawn there.

Marquesas sardines have been planted in waters around Oahu in the past few years, the last time in June, 1958. Lately, commercial fishermen have caught small-size sardines not only off Oahu but also near the islands of Kauai and Maui, indicating that the Marquesas sardines have successfully spawned and are establishing themselves in Hawaiian waters.

This is good news to Hawaiian fisherman.

3 States Invite Congress To Control Dogfish Sharks

● What to do about dogfish—one of today's top topics in the North Pacific coastal fisheries — commanded much of the attention of the Pacific Marine Fisheries Commission meeting held in Seattle late in November.

All the discussion eventuated in bouncing the ball to Congress with a resolution passed asking passage of a law which would control dogfish (method not specified) in cooperation with Canada.

The thorny subjects of seasonal closures for shrimp and pertale trawling — which have more spiny points than a big red rockfish — resulted in proposals that Oregon and Washington undertake to work the matter out in consultation with Canada, and all in such a way that the subject species would be protected during their spawning periods, when reproductive value is greatest and commercial value least.

The commission's advisory committee asked that its membership be enlarged, and that a representative of the sport fisheries be named from each state. The commission acceded to the request and raised the advisory group by two to seven from each state.

Another year and Alaska will be a full-fledged member of the commission, if it wants to be.

● Bert Johnston, advisory committee member representing Washington trollers, pleaded earnestly for action which would make it possible for the troll fishery of the Westport area to open a month earlier than at present. His recommendation was that the industry join with the State of Washington in studying the biology and economics of the fishery in an effort to arrive at a means by which this could be brought about without doing violence to the efforts to rebuild the Columbia River Fall Chinook run. Mr. Johnston contended that the fish formerly taken in the early spring off Westport were bound in a northerly direction and that the present closure tends to benefit fishermen further up the coast rather than the spawning escapement of the Columbia River.

Milo Moore, Washington director, readily agreed to such a program of study during the 1959 fishery, to lay the basis for possible recommendations a year hence.

● Tri-State meeting of 1959 differed from its predecessors to the extent that the biological staffs of the states shortened their presentation sharply to permit more discussions and questions from the advisors and interested persons generally.

The Canadian visitors were given the privileges of the floor and availed themselves of them fully. James Sinclair, president of the Fisheries Association of British Columbia, participated actively, enlivening the meeting with flashes of his abilities in debate and repartee which made him a famous figure in Parliament.

● Chairman of the meeting was Richard S. Croker of California. New officers chosen for 1959 included: Milo Moore, Washington, chairman; Charles Mahaffey, Oregon, vice chairman; Mr. Croker of California, secretary.

PACIFIC Fisherman's NEWS

DECEMBER 1958

Japan Rejects U.S. Plea to Reduce Fishing Pressure on Alaska Salmon, But Abstention Continues in Force

What will be the effect of the International North Pacific Fisheries Conference at Tokyo upon actual fishing operations of American and Canadian fishermen in 1959?

1. *There will be no fishing by Japanese commercial vessels for Halibut or herring in North American coastal waters, nor for salmon east of the provisional line at 175 deg. W. longitude.*

2. *Neither will there be any cessation of fishing by Japanese high seas vessels west of that line.*

3. *In the case of salmon some additional curtailment of fishing will be supplied to the stocks native to the rivers of Bristol Bay. If no substantial part of this curtailment is provided by the Japanese government or industry, further restrictions, and possibly complete closure, can be expected on Bristol Bay.*

There are the plain and straightforward facts. Details of the meeting are dealt with more fully in the general pages of the December issue of *Pacific Fisherman*. They can be examined there in rather full form, but no matter how you look at them, the three conclusions briefed above are in substance the full meaning of the meeting from the standpoint of 1959 fishing operations.

Speaking plainly, the Japanese abstention from fishing salmon, halibut and herring in the eastern Pacific was continued only because the United States and Canada agreed that these stocks continued to qualify for abstention. Japan took the opposite view and sharply attacked the American and Canadian cases on salmon and halibut, the latter in particular.

Not much was said about herring, but there is plain evidence in the Japanese industry that a movement to upset abstention from fishing herring, at least in the waters of Bering Sea, is brewing in the minds of Japanese fishing companies.

While most of the discussion regarding Japanese fishing and abstention has revolved around salmon, the vigor of the Japanese attack upon the Canadian and American cases qualifying halibut for abstention showed plainly that the Japanese have ambitions to enter this fishery as well.

It is a point often overlooked, but a fact nevertheless, that Japanese abstention from North American halibut and herring fisheries is not bounded on the east by any line whatsoever. The provisional line at 175 deg. W. longitude applies only to salmon.

The abstention case is closed so far as 1959 is concerned, but hereafter it will be reopened and re-examined annually. This matter has not previously come up for active determination because the treaty provided that abstention should not be questioned or examined for the first five years of the treaty's life. Thereafter, it will be called up and re-examined at each annual meeting.

New cases, based on new evidence, will be submitted next fall, providing new evidence is available.

Scientific evidence submitted at the meeting showed that Fraser River Sockeye salmon in 1958 were present in the sea as far west at 155 deg. W. longitude; and Sockeye from the Naas and Skeena as far as the extremity of the Alaskan peninsula. Whether they were present further west is not known, as the Canadian sampling was conducted only to 155. Nevertheless it was proved positively in 1958 that Canadian salmon ranged much further to westward than had previously been supposed.

So far as Bristol Bay prospects for 1959 are concerned, they are grim indeed. The United States Fish and Wildlife Service expects a run in 1959

(Continued to page 19)

San Francisco Boats Change Hands

Patsy Jean, formerly owned by the late Henry "Frenchy" Hauret, has been sold to Mike Gelardi, son of the owner of Fisherman's Grotto restaurant, San Francisco. The boat has been re-named *Baby Carl*.

Mike Damato, formerly owner of the purse seiner *Sunlight* of San Francisco, has purchased the boat *Maria B. II*, from Salvatore Bertolino, Monterey. The boat has been re-named *Nick D.*

J. Gacaloni, San Francisco, has repowered his crab boat *San Antonio* with a rebuilt GM 4-71 diesel engine purchased from and installed by Shoreline Diesel Maintenance, Fisherman's Wharf, San Francisco.

Rosie, the crab boat formerly owned by Spinelli, San Francisco, has been sold through Dan Bohne & Son to Lloyd Jungclaus, Morro Bay.

Fog Brings Disaster To Norma Jean

The 45' Albacore boat *Norma Jean* was rammed and sunk by the 7,660-ton coast-wise pulp tanker *Duncan Bay* in a very heavy fog two and a half miles northwest of the San Francisco lightship.

The owner R. C. Wainwright, Wilmington, and his boat puller, Edward Cassell, San Diego, were picked up by the *Duncan Bay*, unhurt.

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Holiday Greetings

from

ALL OF US AT

NORDBY'S

OUR WISH IS FOR
LOTS OF FISH IN
YOUR NET IN 1959

North Pacific Fisheries Conference

(Continued from page 17)

comparable with the very small run of 1958, which produced the lowest red salmon pack in Alaska's history.

The Bureau of Commercial Fisheries is adamant in the declaration that additional conservation measures will have to be applied. If they are not forthcoming from the Japanese, they must come from American fishing time, even to the possible extent of complete closure of Bristol Bay next year.

The Japanese Section seemed quite insensitive to the effect which such closure would have upon American public opinion and possible Congressional action.

That's the picture, and it is not bright.

Bates, Ladd and Patty Attend Tokyo Conference

North Pacific business men outside the regular American delegation attended the Tokyo meeting of the International North Pacific Fisheries Commission including Wm. A. Bates, Ketchikan banker, a newly-appointed member of the International Pacific Halibut Commission, who was in Japan on business at the time and attended the meetings of the Commission as an observer from the International Halibut Commission.

R. D. Ladd, vice-president and general manager of the Pacific Marine Supply Company, Seattle, together with Mrs. Ladd, was in Tokyo during the meetings in the course of a business trip through the Far East.

Stanton H. Patty, staff reporter of the Seattle *Times*, attended the conference and reported upon it for his newspaper, providing a degree of coverage for the conference of the International Commission which had not previously been accorded by the American press.

S. F. Fishermen's Fiesta Opens Crab Season

San Francisco added another civic celebration to its calendar of annual events— the Fishermen's Fiesta observing the opening of crab season.

The inaugural three day festival was held November 14-16 at Fisherman's Wharf. Bands, street dancing and festive decorations highlighted the occation.

The fishing industry and Fisherman's Wharf restaurant owners joined the San Francisco Chamber of Commerce and the Board of Harbor Commissioners in sponsoring the event, and it is hoped the affair will grow into a major tourist attraction.

Heading the Northern California Seafood Institute's delegation on the committee chairmanned by Richard M. Oddie, Bank of America, and chairman of the C of C's marketing and sales promotion committee were Edward Puccini, A. Puccini & Sons; Rod Barnes, Standard Fisheries, Inc., and John P. Gilchrist, secretary, NCSI.

Fish Union Members Vote Status Quo

After much hassling and NLRB action, a long-drawn-out election among 49 San Pedro purse seiners left the labor union situation exactly where it was before.

The NLRB last month completed elections designed to give the fishermen a choice between belonging to the AFL-CIO Seine and Line Fishermen's Union or the ILWU, International Longshoremen's and Warehousemen's Union. Each union wanted to be sole bargaining agent for all the fishermen.

The fishermen chose to keep both unions just as before.

Leaders of the contending unions differed as to the significance of the election. John Calise of the AFL-CIO group called the election "our fine victory." Mel Kolumbic of the ILWU said the balloting left the fishermen divided and comparatively weak in bargaining strength.

Co-Op Ladies Name Leaders

While the boat owners of the San Pedro Fishermen's Co-Operative are busy catching fish, their ladies, organized in the Fishermen's Co-Operative Auxiliary, have their own social fish to fry.

Last month they elected a new group of officers and set out on the new year's program of philanthropic and social work.

Mrs. Anthony Mascola is the new president; Mrs. Milan Zar, vice-president; Mrs. J. Evich, recording secretary; Mrs. Paul Blazevich, corresponding secretary, and Mrs. John Kunich, treasurer.

Storm Sinks Three Boats

The roughest weather yet this year in California sank three fishing boats last month, and wrecked two others by blowing them on shore.

Three men were believed lost when the *Dorothy R*, an albacore boat based in San Pedro, went down in the wild storm early in November. Three others, including the skipper, Russ Farnell, were picked up by Navy and Coast Guard vessels. The survivors, besides Farnell, are Robert Park and Paul Anderson.

The *Linodia*, a San Diego boat, capsized and sank off Pt. Vicente, but her crew, consisting of Curt Wilson and Lawrence Scott, swam ashore in life preservers.

The *Barbarena*, a 45-ft. Albacore boat also from San Diego, was pounded to pieces on the municipal breakwater at San Pedro, but Carl Swails of Newport and Cecil Wilkins of Costa Mesa were able to make it ashore safely.

The *Marco Boy*, San Pedro, limped into Newport Harbor with help, after she had shipped water off San Clemente Island. And the *Vagabond* was driven ashore on the Cabrillo Beach, San Pedro, breakwater from her anchorage inside the harbor.

The Marine Exchange at San Pedro said winds blew at 32 mph in San Pedro during the storm, but were much more violent in the open Santa Catalina Channel.

'Celia Jean' Burns

The 42-foot *Celia Jean* caught fire last month in Neah Bay harbor, and the Coast Guard was able to beach the boat before extensive damage took place. No one was injured, only interior damage occurred, and the fire was believed to be caused by an overheated stove. Owner is Robert Soeneke of Neah Bay.

Pacific Fisherman's NEWS

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Gillnetter Champion is John Johnson, who won the Astoria, Oregon, Fish Festival free-for-all in this bow-picker with its 215-hp. Interceptor engine.

60 Years ago—

When a Fish Boat Engine Was a Dream of Pioneers

(Reprinted from the Astoria Budget, Jan. 25, 1898)

● There is a possibility, even a probability, that the days of the Columbia river boatpuller are numbered. Inventive genius aided by gasoline has come in his way. No longer will it require the tugging of his sturdy arms at the oars that the net may be cast. The captain of the boat will simply touch a button, or rather a lever, and away the boat will speed, propelled by a power triple that contained in the boat pullers' muscles.

The idea is that of F. J. Larkin, a machinist of San Francisco, now in Portland. He proposes equipping the fishing boats of the Columbia river with a small gasoline engine, of his invention, the engine driving a propeller. Mr. Larkin says:

"My engine is no experiment. At San Francisco I have fitted a number of fishing boats with them and they work perfectly. No alteration of the boat is required beyond the seating of a small shaft bearing through the stern post and the shifting of the lower dowel of the rudder to allow of the cutting out of sufficient space in which the propeller may work.

"The engine itself is placed snug up to and above the fish-box in the mid-ship of the boat. It is covered completely with a sheet-iron hood and as it stands but 19 inches high is not the least in the way. The shaft bearings and shaft are run beneath the bottom boards, where nothing can reach the works unless intentionally.

"I am told that something like 1000 boats operate on the Columbia river during the salmon fishing season. The earnings of a boatpuller in a season are between $250 and $400, oftentimes more. My engine, placed in a boat and ready to operate, costs $92. The captain can start or stop it from any part of the boat through a pull on the yolk lines leading to the valves and running along either gunwale. Again, the engine develops at full speed 1¼ horse-power, which is triple the strength a man can supply to a pair of oars.

"Now, take $250 as the amount paid a boat puller during a season and the expense will be $250,000. Fitted with my gasoline engine, the expense will be about $8.20 to the boat or $8200, of course there would be the first cost of $92,000 in equipping the boats, but that would be for all time. I feel confident the cannerymen will recognize the efficiency and economy of my idea."

Mattson Drowns in Wreck

Body of Toivo W. Mattson of Portland was found after partner Rudolph R. Rautio had escaped from the 32-foot troller in which they had set out from Depoe Bay to Astoria. Their troller smashed up on rocks on the north jetty at the mouth of the Columbia River in fog and rough water.

They radioed for help, then decided to swim for the jetty rocks, believing they were near the south jetty. Coast Guard search was concentrated there during the night, while Rautio, who made it to the jetty, stayed there believing he had reached the south jetty where he would be unable to get to shore. At dawn he saw he was on the north jetty, from which he could walk to the Cape station.

Search from there proceeded at once, and Mattson's body was found.

Two Home-Built Troll Boats Join Puget Fleet

J. W. Tincker works at Bellingham Shipyards Co. and like many men in the trade, has boatbuilding as a hobby as well as a profession. After five years' sparetime work, he just this spring completed a 40′ troller he has named the *Jimobe*. He planned to go up this summer with it to Alaska around Duke Island near Ketchikan for first fishing.

He has worked aboard gillnetters, purse seiners, tuna boats, during his career, but this is his own boat and his first. He has worked at Bellingham Shipyards off and on since 1952. Describing the *Jimobe*, he told *Pacific Fisherman* that it is 40′ by 11′ with 5′ draft, 13 net tons, built partly of Alaska cedar with fir below waterline and oak frames and mahogany trim. Two fiberglass fuel tanks hold 400 gallons total; third tank holds 80 gallons fresh water. Power is a 143-hp Chrysler 8-cylinder engine. His electrical equipment includes a Ross Fisherman depth finder, and radio and automatic pilot.

Mr. Tincker reported at the same time that another troller has been built in similar fashion. Adolph Sandness, a highline troller, sold his *Adhara* and has been building a 42-footer at his own home to be powered with a 90-hp, 6-cylinder Cummins diesel.

Troller "Vigilant" Sold

Pat Whiting sold his 41′ troller *Vigilant* to Oliver Holcomb of Salinas, Calif. Built in Rainier, Oregon, the *Vigilant* has 1¼″ mahogany planking, a Chrysler Crown 115-hp, engine, Bludworth "Beacon" direction finder, Wood-Freeman automatic pilot and hydraulic anchor winch and salmon gurdies.

Jack B. LaRugue

Jack LaRugue of San Diego, formerly cook aboard the fishing vessel *Sun Voyager*, died recently, at the age of 59. A World War II veteran, he was given military burial in Ft. Rosencrans National Cemetery. He is survived only by his widow.

Standard Engineer's Field Report

CASE HISTORY
Chevron Pressure
PRODUCT Primer System
Allman-Hubble Tugboat Co.,
FIRM Hoquiam, Washington

Priming System starts diesel on 1st or 2nd turn — saves batteries and eliminates fire hazard

COLD WEATHER STARTING is no problem aboard the Ranger, (above), 43-foot work boat operated by Allman-Hubble Tugboat Company in the Aberdeen-Hoquiam area. A small steel cartridge, charged with Chevron Priming Fuel, fires her 150 h.p. Caterpillar D-17000 power plant on the first or second turn—avoiding the usual long cranking period that exhausts batteries. Mr. Howard Hubble, skipper of the Ranger, is shown (right) inserting primer cartridge in Chevron Pressure Primer Discharger mounted on engine. "This system," Captain Hubble says, "not only saves batteries, it gets away from the dangerous practice of holding a rag soaked in starting fluid up to the breather cap. You get a safe, controlled charge, with no danger of fire or a cracked cylinder head caused by a racing engine." The Chevron Pressure Primer System is Coast Guard approved. It starts diesels in less than 10 seconds at -50°F.

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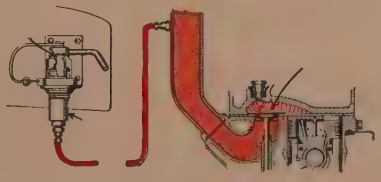

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STANDARD OIL COMPANY OF CALIFORNIA

Moss Landing Boats Active This Fall

Several Moss Landing boats ended the tuna season early and went to San Pedro to "scoop" mackerel. Among them were the *Hey Mama* with Lonnie Suggs and the *Rita Marie* skippered by E. W. Allison and boat puller Jack Norman. J. A. Landen, who sold his *North Star* to Harry Miller last summer has just returned from a six months visit to his home town of Stromstat, Sweden. Jim Fulllove of Seattle was in port on the schooner *Lincoln,* purchased last year from veteran fisherman Fred Sandness. Though Jim didn't break any records he is content wih his season's fishing. While Nash Martin fished on the *San Martin,* his wife, Hertha, visited family and friends in Germany. John McGonigle, master of ocean vessels for many years, has purchased the salmon troller *Helen M.,* formerly Don Hart's *Marlene.* Philip Friscia, longtime Monterey bay fisherman, died of a heart attack recently. He was the owner of the *Kitty.* Sewall Magnini of Portland plans to leave his *Judy II* in Moss Landing this winter. Magnini purchased the boat from Bruce North last summer, who in turn bought the *Banshee II.* Joe Spadaro, captain of the Monterey purse seiner, *New Marettimo,* reports this season's sardine fishing the best since 1948-49. Fish are being caught off the Santa Barbara Islands with limits of 40 tons a night, all of them going into cans. This eliminates the oil and meal reduction process of the industry which formerly absorbed such vast amounts during the sardine fishing heyday of the middle 1940's.

Other Monterey seiners participating in the first good season for years are the *E. S. Lucido, St. Christopher, Endeavor, Two Brothers G. II,* formerly the *American Rose,* the *A. A. Ferrante* and the *Dux.*

HPC, Eureka To Buy Crabs Too

Halibut Producers Co-op, Seattle, which has renovated part of the former Weissich Fisheries plant at Eureka, Calif., and which has been buying salmon and Albacore, will buy crabs, during the forthcoming season, according to Julian "Mike" Wojcik and Al Swiss, co-managers. New hoists have been installed at the plant, among other improvements.

Walter B. Johnson is manager of the Co-op in Seattle. Bill Grader, Grader Fish Co., Fort Bragg, Calif., represents HPC at that port. The HPC now has buying stations from Fort Bragg to Seward, Alaska.

Officers Named By S. F. Crab Boat Association

Dominic Battaglia, owner of the *Paula B.,* formerly the *Faneg,* has been elected president of the San Francisco Crab Owners Association. Albert Spadaro, owner of the *Santa Ana,* was elected secretary-treasurer of the association. No vice-president was elected.

San Diego Shipper Acquires Big Frozen-Tuna Transport

National Marine Terminals Co. of San Diego has purchased a 319' motorship to be used in shipping frozen tuna from Peru to the Westgate-California cannery at San Diego.

The motorship, formerly called the *Jafco I,* will be renamed *Westgate,* and will undergo some conversion work in San Diego before going on the Peru run. She is a twin-screw vessel capable of 14 knots, and was formerly in the banana trade between Ecuador and New Orleans, owned by the United Fruit Co.

Built in Sweden 20 years ago, she has been under Panamanian registry and will remain so. She was brought to San Diego from New Orleans by skipper Ken Raynard of Chula Vista, Calif.

Christmas Greetings

To All of Our Fisherman Friends From

Dave McIntyre
Don Hopen
Pete Myers
Bill Myers
Bill Hough
Arnold Mathisen
Fred Bickoff
Leo Wilburg
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The 1¾ KW installation on the "Gulf King," pictured here, utilizes a Lister Model LD1, 3½ HP @ 1800 rpm (5 HP Gross Rating), only 24½" high, 19" wide, making for extremely compact mounting.
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Fishing Fleet Finds Dock Satisfactory

Vancouver's new $1,000,000 fish dock is at last being used almost exclusively for the purpose for which it was built.

During the summer, following completion of the dock in British Columbia's metropolis, it was used mostly by pleasure craft because of the lack of facilities needed by the fishing fleet.

Fishermen complained that water was not piped to the floats and said that there was no electricity and no nearby restaurant. Tenders have now been called for running power lines and water pipes to the dock, and the National Harbors Board, which administers the dock, is studying applications for establishment of a seafood restaurant.

For a while it looked as though fishermen, after urging the building of the dock to relieve congestion in Coal Harbor and elsewhere, were going to boycott the facility after their long campaign had succeeded. However, Harold Christenson, secretary of the Fishing Vessel Owners Administration, reports that with the close of the salmon season more commercial craft are drifting into the dock and it should be fairly well occupied by fishboats this winter.

New Scow Joins Coast Oyster Fleet

Coast Oyster Co., Eureka, Calif., has added another 18 x 50′ steel scow to its fleet.

The scow which was built by Eureka Boiler Works has two conveyors for unloading oysters. The conveyors are powered with a 12 hp. Lister-Blackstone diesel engine.

According to R. M. Douglas, manager, Coast Oyster expects a yield of 140,000 gallons of oysters from Humboldt Bay for 1958. Some 6,000 cases of seed have been planted.

The company has sold its Drake's Bay and Bolinas Bay beds to Charles Johnson, a former employee, who will operate them. About 1,500 acres are involved.

Body of Albacore Fisherman Found

A body believed to be that of Louis Rogenes, Pacific Northwest Albacore fisherman, was discovered aboard his fishing boat *Valor III* on the high seas, ending a nearly two-month search for the craft and its owner.

The boat was spotted by the submarine salvage ship *Florikan,* about 500 miles east of Honolulu, Coast Guard authorities reported. The search began last July after the vessel failed to show up.

Illustrated here is one of three new 32′ seiners recently put into operation by Snug Harbor Packing Company. Built by Foss Boat & Joiner Co. at Port Blakely, Washington, these boats are powered with OSCO 4DF Ford Marine Diesels turning 18x15 wheels through 1.5:1 reduction gears. Snug Harbor Packing reports unusually fine economy of operation.

Welfare Fund for San Pedro Fishermen

A hospitalization and life insurance plan for fishermen and boat owners was put into operation late last month in San Pedro. Participating are members of the ILWU Fishermen's Union, Local 32; boat owners of the Fishermen's Co-operative who agree to the plan and their dependents.

The plan provides for $2000 life, $1000 accidental death or dismemberment, and hospital benefits for illness and specified kinds of surgery.

The plan went into effect when documents were signed by John Royal, Local 32 secretary, and Mason Case, manager of the Co-op. Matt Simundich and John Marincovich were named trustees, and Bob Mezin became administrator.

Two Patrita San Pedro Crew Survive

One man was drowned and two others rescued when the Albacore boat *Patrita,* San Pedro, sank off Morro Bay, Calif.

The drowned man, whose body was later picked up by the Coast Guard, was Ole Johnson, age and address unknown. The two survivors, Robert C. Starr, Morro Bay; and Henry D. Wasson, Bakersfield, who swam a mile to another fishing boat, the *Mavel,* were also returned to port by the Coast Guard.

The *Patrita* was about 50′ long and was built in San Diego in 1918.

Cincotta Matriarch Passes

Tony Cincotta, owner of Cincotta Bros., San Francisco and Monterey fishermen's supply and equipment firm, his brothers and sister are receiving condolences of their many friends on the death of their mother, Mrs. Maria C. Cincotta, 86, who passed away last month.

Mrs. Cincotta leaves Jack, John, the manager of the Monterey store, Antone (Tony) and Joseph Cincotta, and Mrs. Lee Knapp.

Tony DiLeva Nets Surprise

Nineteen - Fifty - Eight being the "year of warm water," you can't ever tell what will wind up in you net.

Tony DiLeva, skipper of the San Pedro purse seiner *San Antonio IV,* caught a school of about ten devil rays along with a catch of sardines this fall.

The devil rays, known scientifically as mobula, are a variety of ray, cousin of the shark, that grows to around 12 feet, is not as deadly as the manta. They are usually found in waters much farther south than San Pedro, but with the rising temperatures in northern waters this year, there they were in Tony's net.

The skipper threw as many overboard as he could catch, but two got away into the hold and finally wound up at Scripps Institute of Oceanography, La Jolla, by way of the California Fish & Game Commission's lab in San Pedro.

New Troller for Von Jensen

Columbia Boatbuilding Company of Astoria recently built and launched a new 28′ troller for Van Claud Jensen of Portland. Engine was supplied by T. B. Cook Engine Co. of Portland and is an Osco Ford Diesel, rated 60 hp. at 2400 rpm. It was supplied with heat enchanger and Paragon hydraulic gear with 2½-to-1 reduction. Propeller is 3-blade, 22 by 18-inch, and engine turned 2550 rpm. on trials, according to T. B. Cook.

San Diego Fishermen Die

Paul Ames, owner of the *Blue Fin,* San Diego fishing vessel, died last month at his home in the border metropolis. Born in Mexico, he had lived virtually all his life in San Diego.

Leland Heaton, a fisherman on the *San Juanico,* tuna clipper, was killed late in October when he fell from the vessel's platforms as she passed through the Panama Canal. He lived in San Diego, had been fishing ten years.

A New Tool For Fishermen

The Recording Thermograph Can Help Catch More Fish Quicker; And it Works Without Sleeping

By
JOHN RAWLINGS
Fisheries Researcher,
California Fish Canners Association

● In looking for tuna the *Recording Thermograph* would be a valuable tool for many tuna boats, and would be a worthwhile refinement of technique for others.

Most fishermen today recognize a "random search" element in finding fish. This factor varies widely by rig, area, and season, but it still figures prominently in the length, and hence the economics, of most trips. Banks, islands, coastal strips and points are found and scouted geographically of course, but it can be pointed out that the occurence of an abundance of tuna on or near these areas is caused by oceanographic conditions brought about by the bank or island, and not by the bank or island per se.

From Tehauntepec south, along the "Coast" to Panama, and even beyond to Ecuador and Peru, an aimlessness of search can prevail. "Shotgun fishing" some fishermen call it. Vast grounds of high, consistent productivity are included in these areas. Several hundred thousand square miles of ocean are involved also, which helps to explain the periods of relatively aimless search for fish.

If the scientists, i. e. oceanographers, marine biologists, etc., were to make a case for the use of a *Recording Thermograph* in looking for tuna they might emphasize the life cycle generated by the nutrient rich deep and colder water rising and mixing with the relatively barren, warmer surface water. Phytoplankton (vegetable) result, then come the zooplankton (animal), feeding on the phytoplankton, and progressively larger animals feeding on the smaller until good tuna feed develops. This generalization might not be of too much interest except that tuna are likely to occur anytime in this area, and this *area is readily detected and recorded,* by the *Recording Thermograph*, night or day. Sometimes in passage, these temperature changes are very slight and of short duration, possibly only a moment or two, and the temperature of the ocean returns to the prevailing norm.

Marine scientists would also mention that oceanographic conditions, (edges of currents, upwelling, convergences, etc.) change during the year and, sometimes inexplicably, from year to year. Convergences and divergences, have been observed to start, remain active for different lengths of time, and then disappear. Storms and long prevailing winds almost surely shift the geographic location of currents etc. many miles. From this it is emphasized that fish occuring offshore at a given latitude and longitude one year may well not be there the next. But somewhere, within a 100-mile square, there may be oceanographic condition similar to that which the fish were working the previous year. However, a 100-mile square is 10,000 square miles.

Japanese Practice

● Japanese literature on fishing methods and techniques has many references to temperature and behavior of tuna. It is generally noted that tuna are taken in quantity in temperatures ranging from 58 deg. F. up to 90 deg. F. This fact, from the standpoint of trying to establish a useful correlation is of doubtful value. Further examination of the Japanese translations reveals an emphasis not on temperature as such, but on *temperature transitions* and the possible ecological environment likely to be found in or near these areas. There is also some mention of the apparent "reluctance" of tuna to go from a warm body of water to a colder. This presumably leads to widely scattered tuna accumulating or banking up, in effect.

It might be mentioned here that all the large Japanese tuna boats now in operation and those being commissioned are equipped with *Recording Thermographs* and Bathythermographs. Further, and to conclude this digression on the Japanese, Bathythermographs were exported by the United States to Japan in wholesale lots shortly after World War II. They are used extensively in the long-line fishing done by the Japanese.

For several years the writer of this article in discussion on the possible correlation of the occurence of tuna and temperature conditions has been inclined to cite the edges (shear) of the counter Equatorial Current in the mid-Pacific and the edges of the Gulf Stream in the Caribbean, Gulf of Mexico area, and the East Coast. On many passages south from Honolulu very little would be seen until the Counter Equatorial was encountered. In the intermingling waters separating the North Equatorial and the Counter Equatorial there would be schools of tuna, usually Skipjack, scattered fish sometimes jumping, and birds working. Similarly, on the East Coast and on down into the Caribbean and Gulf area, the Gulf Stream invites the use of a *Recording Thermograph* in looking for any of the pelagic fishes. The main body of the Gulf Stream is a discouraging place to look for anything. But here again along the sides, in the area of temperature transition, are found Skipjack, Blue-fin, Bonito, and other species of tuna.

These examples have been protested by one authority in marine science as "possibly not paralleling" conditions in the eastern Pacific tuna fishery. This is a legitimate objection and must be accepted, but in the way of a basic illustration the writer still feels they warrant inclusion here.

What Makes Fish "Hot"?

● In September, 1956, the writer was working on a clipper equipped with a *Recording Thermograph* in the Tehauntepec area. For six consecutive days 20 to 40 tons of fish came aboard. On every occasion, when the vessel approached or was on fish that bit well, the *Recording Thermograph* trace became a regular fluctuation. This regular irregularity, or fluctuation, is attributed to an oceanographic condition. It can not be attributed to the roll of the vessel, porpoise, the

fish themselves, the time of day or the weather generally. According to oceanographers, however, there may be and very likely is a connection between this condition and the wind over the preceding two or three weeks. The theory goes something like this: A dry wind blowing from the beach (as occurs in Tehauntepec from time to time) picks up moisture from the sea. The surface water, possibly down to the thermocline, increases in salinity, and hence, specific gravity. The deeper, colder water retains its original, lesser salinity. The surface water becomes actually heavier than the water beneath it. At this stage, the surface water breaks off in chunks, and being replaced by the colder water beneath, gives a fluctuating thermograph trace. A name for this condition is "convection".

Most fishermen are aware of the various oceanographic conditions mentioned, and many fishermen pay close attention to surface water temperatures and temperature changes. However, some fishermen "make a case" for the use of a *Recording Thermograph,* although they might not be thinking in terms of a temperature recording instrument.

For example, experienced, observant fishermen have noticed temperature changes while in the racks fishing particular "hot" schools, and on the short moves from one hot school to another in the same area. The possible correlation, between this observation by fishermen and the observation by thermograph mentioned, is obvious.

Finding fish on or near a color change in the water is common enough to require no mention at all except that *a color change is always accompanied by a temperature change,* although it may be but ½ of one degree. If this were crossed at night, the thermograph would record and preserve the information. The captain, if he hadn't left night orders to be awakened, could, the following morning, consider and decide whether it was worthwhile to go back and check. Any upwelling, contact margin, or shear would be similarly recorded for his consideration, and whether he returned, heaved to at the time, or whatever action he took, he would at least know, and have a record of the water that had gone under the keel.

Logs and Fish

● Floating logs have long been the object of many exhaustive searches. Sometimes the tuna near a floating log will load the boat. Sometimes several boats. The size of the log does not seem to figure too prominently. However, the length of time it has been in the water usually does. The older, more water-soaked and covered with barnacles it is, the more likely it is to "Have fish". And the older it is, and water-soaked, the more likely it is to be almost totally submerged. Being almost submerged the ocean currents act upon the log more than the wind. From this it follows that the best place to look for these logs is along the contact margin where two currents are in shear, or where there is a condition of convergence. In the case of two ocean currents in shear the log would remain in the intermingling waters of the two currents, that is in the relatively turbulent band separating the two currents.

Particularly observant skippers have noticed that a floating log is almost certain to 'have fish' if small 'silver' sometime 'blue' bait fishes usually less than an inch long are seen in the *general area.* Often times these small fishes are seen before a log is sighted.

'Suitcase fish' are sometimes found in these areas while looking for logs, and a conclusion that might be drawn is that the logs mark an area where a life cycle has been generated and has progressed to the point where feed for tuna has become relatively abundant.

A boat arriving upon a temperature transition in any broad area where logs are 'paying off' could put the thermograph to use by running out a search pattern to determine the general direction taken by the oceanographic condition. Then diagonal courses could be made across the area of intermingling waters between the two currents with the chance of finding a log materially increased.

What Is an R. T.?

The *Recording Thermograph,* which probably should have been described at the outset, is made by several manufacturers. The writer has had experience with two different types over the period of the last eight years. The best type instrument for the job has a 12" hinged glass dial face enclosing a circular paper chart reading from 50 to 100 degrees F. from the center out, and calibrated for 24 hours on the circumference. The instrument can be had with a clock winding mechanism or with an electric motor like an electric clock. The hinged dial permits notations on the chart itself next to the temperature trace at any time. The thermal bulb element on the end of the capillary should be installed in main condenser sea water suction, or in any case, where it will be in circulating sea water at all times. If it is hooked up to the main engine sea water circulation on a direct reversible job the stopping and starting of the circulation causes an erratic, confusing trace on the thermograph chart and, when drifting at night, useless temperatures are recorded.

These instruments cost about $200. The charts are $3.00 per hundred. Installation can be made by any competent Chief without docking.

Not to be overlooked is the fact that the *Recording Thermograph* can be put to a very important use in trying to work "tender bait" from one temperature to another. Properly installed, it gives the sea water temperature change before the temperature in the wells has changed appreciably.

Laboratory experiments with some bait fishes have shown that they will accept quite a temperature change if it is introduced over a period of several hours. These same bait fishes die if the same temperature change is made abruptly.

Summarizing and concluding it must be recognized that there is a lot more to the picture than can be presented in a brief discussion. At least a dozen interrelated sciences are involved.

It is stressed that the use of the *Recording Thermograph* does not replace any of the conventional methods of finding fish. Certain areas of temperature transition invite intelligent investigation if only for the few reasons detailed here. Further, it is the firm conviction of the writer that, over a period of time, with experience and co-ordinated interpretation, additional correlations, now obscure, would be established.

Coos Bay Fishfarm Ready For Oregon Experiment

Oregon Fish Commission and Weyerhaeuser Timber Co. recently made joint announcement of construction of an experimental natural fish farm for salmon on the east fork of the Millicoma River in Coos County, Oregon. Re-location of a logging road created a half-mile below oxbow in the river; Commission director Albert M. Day explained that the pond will hold some 500,000 fingerlings with supplemental feeding under natural conditions.

When one year old, the fish will be released into the river, ocean-bound. The experiment could lower cost of raising fish in hatcheries. Three ponds leased for one dollar from the Menasha Plywood Co., on the nearby south fork of the Coos River, have been in operation for several years. "The timber companies have expressed a genuine interest in the improvement of our fisheries resource," Day said. "There was no other reason for them to cooperate with the commission in these projects."

Good for a hundred more years . . .

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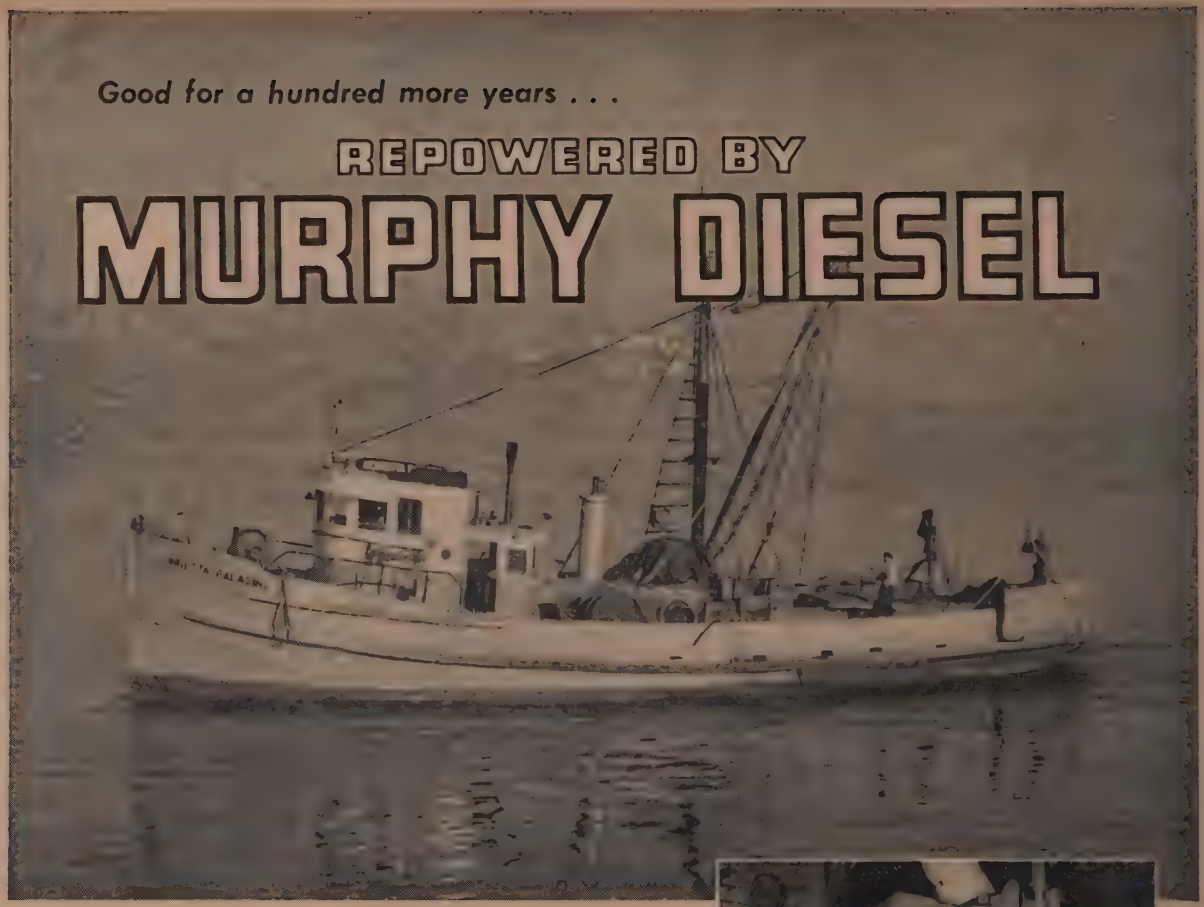

"Repowered by Murphy Diesel" is the tune more and more of the older boats are singing these days! The *Henrietta Paladini*, 61-foot trawler originally built in 1928 and now owned and operated by A. Paladini, Inc., San Francisco, is one of the latest boats to be repowered by Murphy for dependability and economy. Her new Murphy Diesel, delivering 184 HP (continuous), is equipped with a 3:1 reduction gear and a 2½:1 front end power take-off to run an air compressor and the deck machinery.

For all-weather dependability and fuel economy, repower your boat with Murphy Diesel. Or if you are planning a new boat, be sure to specify Murphy for "true diesel" power. Ask your Murphy Diesel Dealer to recommend the engine that will best suit your boat and operations.

In the engine room of the Henrietta Paladini, Skipper Sebastiano Bussalachi, who has been with the Paladini firm for the past 14 years, stands beside his new 184 HP Murphy Diesel.

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SCOPE and SOUNDER

Monthly digest of present-day pioneering methods and equipment in world fisheries.

By PETRALE

Who Wants Five Million or More Dogfish Sharks?

In 1944, fishermen along the West Coast of the United States and Canada caught 110 million pounds of dogfish. The 13 million pounds of livers landed were valued at $6,000,000 at the fisherman's level. During the heyday of the vitamin A shark industry, 1940 to 1948, trawlers, gill netters, and line fishermen from Northern California to Alaska sought out and captured the highly prized dogfish.

Today, 14 years after the peak of dogfish shark fishing, the species has become a scourge to fishermen of the Pacific Northwest. Since the cessation of the intense fishery, populations of dogfish have increased and overrun many of the traditional fishing grounds. These increasing numbers have caused considerably damage to net and line fishermen, as well as to salmon sport fishermen. A species that once was "Swimming Gold" has been reduced to the category of pest, predator, and competitor.

On September 2, 1959, the 8th Congress of the United States passed public law 85-887 (S-2719) "authorizing and directing the Department of Interior to investigate and eradicate the pedator dogfish sharks to control the depredations of this species on the fisheries of the Pacific Coast, and for other purposes." A sum of $95,000 was authorized to be spent to carry out the purposes and objectives of the act.

To formulate a well planned program for dogfish control or study the Bureau of Commercial Fisheries has named a three-man committee: Samuel J. Hutchinson, Bureau of Commercial Fisheries; Milo Moore, Washington Department of Fisheries, and John Wedin. They will be responsible for summarizing information on dogfish abundancy, distribution, etc., and will make recommendations for carrying out the dogfish bill.

The destructive and damaging effects of dogfish is not a new problem nor is it peculiar to the West Coast of the United States. The same species of dogfish which plague local fishermen also inhabits the waters off Japan and northern China and is found throughout the temperate and subarctic waters of the North Atlantic.

Just after the turn of the century, the English government was faced with a problem similar to that which faces the West Coast today . . . "What to do with the dogfish." Their answer was to encourage its use for human consumption through cookery experiments and by subsidizing transportation costs. The experiments were successful and a fishery for dogfish grew slowly. Following World War II, dogfish became common on the fish docks throughout Europe. The Food and Agriculture Organization of the United Nations reported that close to 85,000,000 pounds of dogfish were landed in Europe during 1955.

Dogfish caught for human food in Europe is skinned shortly after being landed. Most of the flesh in England is used in the fish and chip trade while in Germany it is kippered. The species is also used for human food in Japan and China.

On the West Coast of the United States, dogfish were important to the Indian tribes who used it for food flavoring, paints, finishing wood and dressing animal skins. Early settlers arriving in the Puget Sound area paid premium prices for dogfish oil, using it for lighting lamps, lubricating machinery and for greasing skidways.

The development of low priced petroleum oils soon put the dogfish back in the pest category where it remained until the early forties. The discovery of high vitamin A concentrate in dogfish and soupfin shark initiated a new fishery along the West Coast just before World War II.

When the war started foreign sources of cod liver and other fish oils were cut off and a major fishery for dogfish developed. Throughout the war, shark livers were the major source of vitamin A used in this country and the catch of dogfish from 1941 through 1947 exceeded half a million pounds. Following the end of the war imports of foreign oils and the development of synthetic vitamin A put an end to our domestic shark fishery. By 1951 dogfish landings had dwindled to less than 10 million pounds and in 1955 total landings of the U. S. and Canada amounted to about two million pounds.

The dwindling fishery has allowed dogfish stocks to rebuild to a high level of abundance. How to control these stocks of sharks is the problem to be solved by the "Dogfish Committee." The answer is not simple. Control on a coastwise basis would mean the removal of from 40 to 50 million pounds of dogfish each year. With the present small market demand, interest in harvesting dogfish would have to be stimulated by Government subsidy or bounty. Unfortunately, $95,000 won't begin to operate a coastwise bounty program.

Some workers feel development of useful by-products which are unique to dogfish would solve the problem, but this may take time and require higher duty rates to protect local fishermen from foreign competitors. Development or use of dogfish for human food has also been suggested. However, the great variety of more desirable bottom fish that are available on West Coast grounds that are not now fished seems to make this possibility slim.

One thing is definite. We have 50 million pounds of dogfish that could be marketed annually. Anybody have a buyer . . .?

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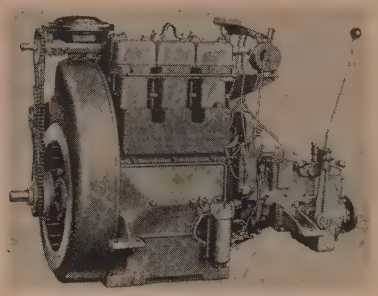


Lister-Blackstone Model HA3MGR

New Models for Lister-Blackstone

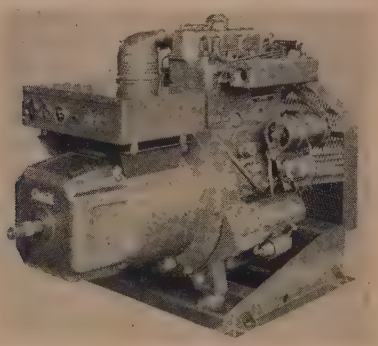
Lister-Blackstone, Inc., 42-32 21st Street, Long Island City, N. Y., announce their latest series of air-cooled marine propulsion engines. Shown is model HA3MGR developing 30 bhp. at 1800 rpm. and a 2 cylinder unit, model HA2MGR is also available developing 20 bhp. at 1800 rpm. These are air-cooled, 4 stroke, diesel engines being extremely compact in design, comparatively lightweight and economical in operation.

Hand starting can be effected from the flywheel end and one of its main features is the simplicity in manual starting even in extremely low temperatures without the use of pre-heating. All working parts and fuel injection equipment are totally enclosed, yet at the same time easily accessible.

A rotary pump situated below the oil level supplies oil under pressure to all crankshaft bearings, the gear train and valve rocker gear.

Shell type main and big end bearings are fitted for ease of maintenance and replacement.

These engines will make a welcome addition to the Lister range of air-cooled marine engines which have already proved themselves extremely popular and dependable in the LD models up to 7HP.



Onan 10 kw Marine Model

New Diesel Plants Announced by Onan

A new series of water-cooled, diesel-driven, marine electric generating plants is announced by D. W. Onan & Sons, Inc., Minneapolis, Minn.

Series MDZB generating plants are available in either 10,000 or 15,000 watt AC size ranges and in all standard 60 and 50 cycle voltages to 460 volts. Completely self-contained, these new marine diesel generating sets will provide dependable electric power for all types of craft. They are designed and built specifically for marine use . . . with all the built-in safety features for below-deck installation.

Apelco Announces New Marine Electronic Line

Applied Electronics Company, Inc., South San Francisco, manufacturer of Apelco marine electronic equipment, announces a completely redesigned line of marine radiotelephone, a depth sounder and an automatic pilot of 1959.

In addition, Apelco will offer two entirely new transistorized radio-telephones to the small boat market. Model AE-17M is a 3-channel 20 watt two-way radio and AE-25M is a 5-channel 30 watt equipment. Both are supplied with exclusive "Flexidyne" whip antenna, antenna mount and crystals.

The MS-11 depth sounder marks Apelco's entry into the depth sounder field. Featuring "readability to one foot" the manufacturer claims an unusual arrangement for insuring contact reliability. MS-11 is a 100' sounder. Other units are planned to cover depths up to 100 fathoms.

Apelco's AP-12 automatic pilot is designed for both "hunting" and "non-hunting" operation. Includes transistorized power unit, hermetically sealed relays, remote control course changer and high quality compass head.

Apelco AE-25M Radiotelephone

New Marine Engineer and Architectural Firm

L. R. Glosten, consulting naval architect and marine engineer, and the firm of Carl J. Nordstrom, naval architect, have announced the formation of a new association for the practice of naval architecture and marine engineering under the firm name of L. R. Glosten and Carl J. Nordstrom Associates.

The new organization, which will be under the management and direction of Glosten, will maintain its offices in the space now occupied by the Glosten firm at 209 Polson Building, Seattle.

According to Glosten, the combining of the present staffs of both organizations will result in a technical group of increased versatility and capacity which he believes will be able to render valuable service in the field of naval architecture and marine engineering to the present accounts of both firms and to the marine industry of the Northwest generally.

Erling Lauritz, who was with Carl J. Nordstrom for a number of years, will continue with the newly formed firm in association with Glosten and Ben Downs.

Harris Handles Waukesha and Climax Engines

Carl Harris has been appointed by A. J. Thompson of Piston Service, Inc., Seattle, to handle sales for Waukesha marine diesel engines and Climax industrial gasoline engines. Harris, well known on the Pacific Northwest waterfront, will contact the trade for these two lines as part of the operations of his own firm, Carl S. Harris Sales. He brings to the field the advantage of his long experience in marine engines' requirements.

Inflatable Rubber Life Raft

Inflatable Life Raft Designed for Fishermen

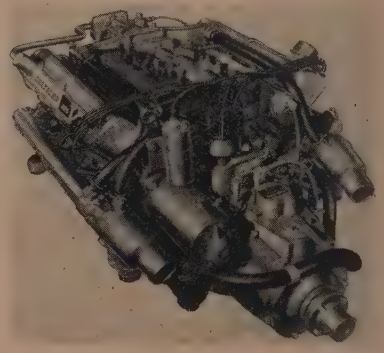
An inflatable life raft for the commercial fishing industry has been introduced by United States Rubber Co.

Called the "6-Man Fisherman's Special," the unit is an economy model in U. S. Rubber's line of inflatable life rafts. As with other rafts in the series, it inflates with CO2 gas in less than 30 seconds after a tug on the single lanyard.

In the fisherman's model, a canopy is raised much as a camper's pup-tent, with the poles converting into paddles, if needed.

The raft and its canopy are made of neoprene coated nylon fabric for maximum service and storage life. The floor is inflated manually and provides rigidity as well as insulation from cold sea water. The whole unit folds into a carrying case 3 feet long, 18 inches wide and 15 inches high. Packed with its standard equipment, including hand pump, paddles, floating knife, sea anchor, signal mirror and rain catcher, it weighs about 95 pounds.

The raft will be manufactured at the Providence, R. I., plant of U. S. Rubber, and sold through marine suppliers. The suggested list price is $525, slightly higher on the West Coast.



Chrysler Sea-V Marine Engine

Bright Outlook for Chrysler V-8 "Sea-V"

A new Chrysler V-8 marine engine, designed to meet the power requirements of 80% of all inboard boats, is announced by Lawrence E. Nelson, vice-president sales, Chrysler Marine and Industrial Engine Division.

This newest member of the distinguished Chrysler Marine line is the "SEA-V" which develops 177 hp. at 3600 rpm. The "SEA-V" offers an unusually low silhouette yet packs all of the performance and dependability of the other engines in the Chrysler marine line. One of the features of the new engine is its unusually quiet power while the engine is in full operation.

"We anticipate that the "SEA-V" will become the most popular V-8 engine for boats in the 17 to 35 foot class within a year," Mr. Nelson predicted.

American Marine Paint Names General Sales Executive

American Marine Paint Company has appointed George A. Horton, Jr., as general sales executive. Horton, who is well acquainted in Bay Area maritime circles, has been active in the marine paint field for 15 years. He will work out of the home office at 311 California Street, San Francisco.

The American Marine Paint line includes high quality, high gloss, long-wearing enamels, undercoaters and varnishes as well as durable finishes for every surface of commercial craft. A leading American Marine brand is Triple "C"—Cape Cod Copper Compound, most widely used salt-water bottom paint on the Pacific Coast.

T. A. Short Oakland Allis-Chalmers Distributor

Thomas A. Short Co., Oakland, for many years well known in the diesel engine distribution business has been appointed central coastal California distributor for the Allis-Chalmers Mfg. Co. line of industrial and marine diesel engines and generator sets, gas line power units and industrial handling equipment, according to S. J. McKeenan, vice-president of the Short company.

Through its new and expanded facilities headquartered at 3430 Wood St., Oakland, Calif., the Thomas A. Short Co. will maintain a large repair parts stock, and offers the best of service facilities.

U. S. Plywood Introduces Non-Skid Boat Decking

A new material for non-skid boat decking has been introduced by United States Plywood Corporation. Called Weldwood Royal Marine Grid Pattern Permaply, the new material is exterior-grade Douglas Fir Plywood to the surface of which has been fused a high-density combination of fiber and phenolic resins.

The cost is well under that of abrasive type coverings used for decking and other marine surfaces for which long wear and non-skid properties are essential.

Because of its hard, wear-resistant, waterproof surface, it does not require painting for protection and is available in opaque buff and opaque black.

White Windmaster, newest item by Wilfrid O. White & Sons, gives wind speed and direction on two dials, from masthead unit built with protected self-lubricating bearings and split construction of vane to give accuracy on any run. Anemometer generates its own electricty, to register speed on dial inside ship. The wind-direction part needs only simple installation, 110-volt ac or 6-volt dc.

Columbian Bronze 5-Blade Propeller for Small Boats

Columbian Bronze Corporation has announced that its 1959 line of Pentadyne propellers will be available in diameters 18" through 28." Diameter range has been extended from 20" in all normal pitch ratios for right and left hand rotation.

Extending the range of available Pentadyne sizes comes as a result of repeated demand for the advantages of a 5-blade propeller for smaller craft. The propeller is recommended for craft from 20 to 60 feet in length.

Columbian Bronze Corporation will provide free technical assistance on request including recommendations of the correct Pentadyne size required for all boats and engines. Write Columbian Bronze Corporation, Freeport, L. I., N. Y.

New Outboard Oil Developed by Standard

Standard Oil Company of California has just announced a major improvement in an outboard lubricant. It's New RPM Outboard Motor Oil, an entirely new detergent-action oil for all 2-cycle engines.

This new oil, the company says, reduced piston deposits more than 50 per cent in new 35-hp. outboard engines after 100 hours of slow-speed operation.

Standard further states the new oil increases sparg-plug life up to 100 per cent compared to ordinary outboard oils.

New RPM Outboard Motor Oil is available at all Standard Marine Stations from Alaska to Mexico.

Burmeister & Wain Entertain

Burmeister & Wain, represented by Per Meulengracht, branch manager, were hosts recently at a reception in Vancouver, B. C., for members of the shipping and boating fraternity, during which moving pictures showing the company's worldwide operations were exhibited.

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General Metals Appoints New Officials

Arthur W. Ostrander has been elected vice-president for sales by the board of directors of General Metals Corporation, it was announced by William E. Butts, president.

Ostrander's promotion to the top sales job in General Metals follows a successful job as sales manager of the Enterprise Engine and Machinery Company, a sales subsidiary of General Metals. He will continue to manage Enterprise sales.

Dale W. Blanton has been promoted to assistant sales manager and Robert A. Thompson has been made manager of contract engineering of the Enterprise Engine & Machinery Company, sales subsidiary of General Metals Corporation.

Lower Can Price For Canco Customers

The American Can Company in an unprecedented action has announced "basic and far-reaching" changes in its metal can pricing policies which, it said, will be reflected in lower can prices for most of its customers.

"These changes, with substantial economies we have achieved through our coil processing program, will mean an aggregate saving to our can-using customers of over $9 million," William C. Stolk, president, said. The coil program, in which the company has invested $32,000,000, he added, "already has amply justified our faith in the economies we believed it could produce."

Major changes in what he described as "long-standing pricing practices" will be the elimination of the method of averaging can prices over broad geographic areas and, instead, "the establishment of a separate F. O. B. price at each of our plants for each type and style of can."

He said the company will "hold the line" on the price reductions until October 1, 1959, "except for adjustments that may be necessary to reflect any increases the steel companies might make in their tin plate prices."

Dick Blaker Now in Berkeley

R. C. "Dick" Blaker, formerly in the General Motors Detroit Diesel Division Western Regional offices in San Francisco, and before that with Gunderson Bros., Portland, Ore., GM Detroit Diesel distributors, is now associated with Williams & Lane., Inc., Berkeley, Calif., northern California GM Detroit Diesel distributors, specializing in marine sales.

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Nordby Supply Offer Life Raft Service

The Nordby Supply Company of Seattle has established an inspection and service facility available to the marine industry for the Elliot Life Rafts.

Joe Johnson, of the Nordby staff, is in charge of this activity and has recently spent considerable time in the plant of the Survival Equipment Corp., San Francisco, U. S. manufacturers of this equipment.

Nordby's are offering complete inspection and service on this type of equipment.

California Fishermen Install Radiophones

Stan Franzen, San Francisco, has installed a 150 watt Kaar radiophone, and a Kaar direction finder on his combination boat *Ermeony*. Both units were purchased from and installed by Kleer Marine-Tronics, 1933 Ocean ave., San Francisco, distributors of Kaar products in that area.

Don Browne, Bodega Bay, installed a 120 watt Kaar radiophone on his combination boat *Tyro*, and Sal Manzanella, San Francisco, put in a Kaar 55 watt radiophone on his party fishing boat *Flying Fish*.

More Dealers for Lister-Blackstone Engines

Oswald Machine Works, San Francisco, has appointed Lyman Repair Service, Eureka; West Coast Engine & Machine Shop, Fort Bragg; Parker Diesel Engineering Co., Oakland, and Hover Equipment Co., Monterey, as dealers for Lister-Blackstone diesel engines.

Among recent installations of Lister-Blackston engines made by Oswald Machine Works are an LD2 on the *Alex Paladini;* same model on the *Western Skies,* Tryg Hamlot, San Francisco; and SL2, 8½ hp. on Pat Simmons' boat *Aiello;* and the same model on Manuel Abreau's *Three Sisters.*

Seven Universal Engines For Commercial Fishermen

Recent sales of seven Universal marine engines to commercial fishing boats out of Seattle are counted by Donn W. Cripe, manager of the engine department of the Pacific Marine Supply Co.

Three of them went North on Alaska cannery account for installation in boats there. They included one 130-hp. motor with 2:1 reduction gear to Halferty Canneries at Kodiak; and a pair of 70-hp. direct-drive engines for Nakat Packing Corporation at its Sunny Point cannery, Ketchikan.

Nick Karuza put a new 100-hp. Universal in the seine skiff of his *Shushartie* in advance of the Puget Sound Sockeye season; and Sign Henricksen put a 70-hp. Universal with 2:1 reduction in his *Pershing's* skiff.

Other re-power jobs include a 50-hp. "Lugger" model with 2¼:1 reduction in Ray S. King's combination boat; and a 12-hp. motor in the fishing vessel operated by E. W. Sweedin of Port Blakely, Wash.

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MID-OCEAN INTERMINGLING

Of Salmon Proved by Sharpened Researches

● Research findings under the activities of the International North Pacific Fisheries Commission have become not only much wider and deeper than in previous years but the scientists themselves have been willing to come to conclusions of much more specific character than in the past.

This became evident at the fifth annual conference of the Commission, held in Tokyo in November, with the scientists meeting over their findings for two weeks before the plenary sessions began.

The report of the Biology and Research Committee accepts without equivocation the existence in the North Pacific of a broad area of intermingling where Sockeye, Pink and Chum salmon of Asian and North American origin are found together. There is evidence, the report says, that each stock may vary from year to year in distribution as well as in size. It is pointed out that it is not yet possible to describe the distribution of such stocks on a quantitative basis—that is, how many are present where and at what times.

Japan made a much more significant contribution, and a much more specific one, than in previous seasons. Interestingly enough, some of the Japanese data was closely corroborative of the American and Canadian findings.

Particularly significant was the 1958 Japanese success in catching salmon by means of longline, many of them quite uninjured, and thus providing a satisfactory means of catching salmon in good condition for tagging.

The North Pacific Commission—Japanese section at the top, from the left: H. Mori, Kenjiro Nishamura, Kyuhei Suzuki. The fourth member, Iwao Fujita, was presiding as chairman of the commission. . . . Canadian section, middle group: James Cameron, Roger T. Hager, John M. Buchanan, George R. Clark; in the rear, from the left, Dr. W. M. Sprules, Dr. M. P. Shepard, F. H. C. Taylor and Dr. K. S. Ketchen. . . . American, section, lower row: Milton E. Brooding, John H. Clawson, Edward W. Allen, Arnie J. Suomela.

● Results of American tagging of Red salmon once again showed that none of the fish tagged were recovered in Asian waters or well toward the Asian coast, while all recoveries were made either in the immediate vicinity of the Japanese fishery or toward the Alaskan coast or in Alaskan streams. No tags of Red salmon have been recovered east of Kodiak Island.

The formal report says that recoveries of tagged Red salmon from 1956 and 1957 tagging indicate that "salmon of Alaskan origin predominated as far west as 175° East Longitude."

The report went on to say: "A similar tendency was observed in morphometric studies.

"It may thus be concluded that Red salmon of Alaskan origin occurred in 1956 and 1957 as far west as 171° East and that mature Red salmon sampled in these years along the Aleutians and in the Southern Bering Sea were *predominantly* of Alaskan origin as far west as 175° East." (Emphasis supplied by editor).

The report says furthermore that "Sockeye salmon with Asian parasite characteristics were found as far East as 170° West."

While the data on distribution of Pink salmon is comparatively small there were indications that Asian Pinks in 1957 ranged as far to the East as the waters of the Gulf of Alaska South of Kodiak Island. Similarly Asian Chums were proven to be great wanderings and the committee reported that the "principal area of intermingling of North American and Asian Chums centered about Meridian 175° West"—the provisional line.

Although the research committee did not specifically state it so, there was a strong implication that the present provisional line provided a generally "acceptable" and "equitable" separation of Pinks and Chums of the two continental origins."

It was obvious from the scientific data that Asian salmon of these species

American advisors at Tokyo—From the left: **Milo Moore**, Washington director of Fisheries; **Harold E. Lokken**, Fishing Vessel Owners Association; **W. G. Van Campen**, U. S. Embassy, Tokyo; W. C. Herrington, Department of State; Clarence L. Anderson, Alaska director of fish and game; Lowell Wakefield, Wakefield's Deep Sea Trawlers, Inc.; Fred C. Cleaver and Clinton E. Atkinson, U. S. Bureau of Commercial Fisheries; Robert C. Kallenberg, Dillingham, Alaska; Dr. W. F. Thompson, University of Washington; John W. Smith, Metlakatla, Alaska; A. M. Day, Oregon director of Fisheries.

are found far to the East of the line in some years, but this fact was not considered a primary problem for the Commission, inasmuch as the United States and Canada do not engage in offshore fishing, and take only mature salmon as they approach their native streams.

Canada's Interest Sharpens

● Observers throughout the meeting noted an evident sharpening of Canadian interest in matters pertinent to the area of intermingling, sharpening as compared with previous years, that is. This generally was attributed to the fact that Canadian scientists reported conclusive evidence that Fraser River Sockeyes in 1958 were found as far west as the limits of the Canadian investigation at about 155° West Longitude; and that Sockeyes from the Naas and Skeena rivers of British Columbia were found in the late summer as far west as the end of the Alaska Peninsula.

There was no evidence presented to show that Sockeye salmon of Canadian origin penetrated as far to the west as the provisional line, but their westward distribution in 1958 had been extended very far into the Pacific.

● The United States scientific findings, while marked by several advances which made them broader and better than in previous years, and which were supported in several respects by corroborative results from Canada and in some cases Japan, also came under sharp fire in the Biology and Research Committee.

As in previous years, these attacks were largely concerned with the "adequacy" of American samples, due to the fact that it has not as yet been possible to secure for examination salmon from the mainland streams of Kamchatka.

Another point of attack was upon the question of "quantitative" data. The Japanese were quick to pick up a Canadian criticism on this point and made it the focal point of their defensive strategy. Insistence upon knowing how many fish were where and at what time challenged the American data.

Yet another point of attack was upon the mathematical method of projecting the research data, rather than upon the competence of the data itself.

1959 Research Program

● Scientific research for the Commission in 1959 will follow the same general lines and scale as in 1958, but with some realignment of emphasis and objective. For example, Canada will give greater emphasis to studies of depth distribution of salmon in the sea, seeking possibly to determine the degree to which there may be vertical as well as horizontal concentrations of salmon.

United States studies of distribution will emphasize the north and south limits of salmon ranging, particularly that in the areas above the Aleutian Islands. Increased sampling of the populations along the south side of the Aleutians is anticipated.

Tagging by the United States will follow much the same pattern as in the past, but the area in which it will be carried out was not indicated. Japan will seek further to perfect and employ its method of utilizing longlines for taking live salmon for tagging. Oceanographic studies and racial investigations based on blood types, scale structures, body measurements and associated organisms will continue as in previous years.

● Beside calling for more representative "shore" samples, which meant salmon from Asian mainland streams, the Biology and Research Committee in its formal report emphasized "the desirability of combining information on the commercial catches of shore based fisheries, on the catches of the Japanese high seas fishery, and on the catches of the high seas experimental fishing operations to give a unified picture of the distribution and abundance of salmon throughout the North Pacific area."

(This emphasized the apparent lack of adequate reports from the Japanese high seas fishing operations.)

Long Range Planning

● The Biology and Research Committee took a careful look at the adequacy of its program for longer range scientifici study. It put its agreed conclusions in these words:

"More time and thought should be given to long range planning, and special attention should be paid to this through submission by each section at the next meeting of the Biology and Research Committee of its long term plan for attaining the various research objectives of the treaty. The plans should include, as an example, consideration of the information necessary to give quantitative meaning to research data. An outline stating the biological and statistical data which would be required to implement the plans should be included."

● King crab studies "have been carefully coordinated" and "excellent progress is being made. . . . . However, the King crab studies have not reached the stage where specific recommendations for joint conservation meas-

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ures with respect to the existing fishery can be made."

No Show-down Now

● Decision to delay an out and out show-down on the question of relocating the provisional line came as result of recommendations by the American scientists for additional research.

While they believed there was "clear justification" for changing the line west to 170° east so far as the Red salmon were concerned, they were inclined to recommend additional corroborative research before recommending that the American Section take insistent action which would inevitably project the decision on the matter of location of the line into the determination of a neutral board of arbiters, as provided by the treaty.

This reacted to prevent a show-down on the question of relocation of the line at the Tokyo Conference.

What Did the U.S. Seek

● Short of its avowed objective of relocation of the provisional line permanently at 170° East Longitude, the United States had two primary objectives in the field of the Protocol at the Tokyo Conference. These, briefly were: 1. A zone of cessation in the area of intermingling east of 170° east, in which the three signatory nations would agree to a complete cessation of fishing; or, 2. "Equivalent" protection for the Bristol Bay salmon stocks, mature and immature alike, by means of seasonal and area controlled fishing for Red salmon in the sensitive area of intermingling.

Neither of these objectives was obtained, but they were clearly stated and referred to a national government as a possible basis for carrying out the aims of conservation of the Western Alaska Red salmon stocks in drawing regulations to govern the future fishery operations utilizing these populations.

U.S.S.R.-Japan Relations

● Relations between the Union of Socialist Soviet Republics and Japan, and the forthcoming conference between these two countries to establish their fishing program for 1959, was an obvious but never mentioned specter affecting the Tokyo meeting, its participants and its decisions. The United States and Canadian attitude was one of unspoken but sympathetic understanding of the circumstances.

National Points of View

● Positions of the three national sections were expressed through various formal addresses as well as in restricted sessions.

In no case was the national policy more clearly expressed than that of Canada in the address of its section chairman George R. Clark at the opening session of the Commission. These following excerpts from his address constitute a crisp statement of Canadian national position:

"Wise management of the fisheries based on the results of scientific investigations is a most valuable investment to insure that the stocks of fish are indeed a recurring asset."

"The salmon of the North Pacific ocean are a resource which could easily be destroyed or at least severly depicted by unwise or careless action by any of the three parties to the convention.

"The spawning rivers and lakes must be safeguarded in order to provide proper and adequate conditions for the reproduction of the species.

"Fishery regulations in the coastal areas must be imposed and administered to allow adequate escapement to these spawning grounds.

"The high seas fishery must be

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regulated to insure that the salmon, while in the ocean, are not indiscriminately and without thought for the future fished to the 'point of no return.'

"It is the Canadian view that

"1. There must be restrictions imposed on the nationals of the three countires to insure that there will always be continued supplies of the valuable salmon resource.

"2. There must be some waiver of the right to free fishing.

"3. No single party to the convention should take the position that its own national interest is paramount.

"4. The spirit and intent of the convention is to maintain the fishery resources of the North Pacific Ocean for the benefit of all concerned, which also greatly promotes and strengthens the bonds of cooperation and friendship between the three countries.

"5. These objectives are being accomplished."

● Beside the statements of Mr. Nishimura already quoted here in some detail, the Japanese position was expressed by three other spokesmen. Mr. Fujita, chairman of the Commission, put it thus in his opening statement.

"Fisheries problems are arousing not only domestic concern but have recently assumed international importance.

"We have already made remarkable achievements in our work, but it is my firm conviction that we should continue our efforts further in the search of scientific truth.

"The present meeting is far more important than any of our previous conferences."

"There are many complicated problems but in the past we have never failed to reach satisfactory solution in accordance with the provisions and the spirit of the convention, thanks to the mutual understanding and friendship that always prevail at these meetings.

Japanese Minister of Agriculture and Forestry Kunio Miura, speaking at the opening plenary session committed his government thus:

"The Japanese Government and people entertain genuine interest in the maintenance and development of the living resources of the sea in order to promote and stabilize the fishing industry."

Japanese industry viewpoint was expressed by Commissioner Kyuhei Suzuki, president of Nippon Suisan KK, one of the three great companies in Japanese fishing. He said:

"This Commission has contributed in no small measure to the development of scientific studies on the wealth of fishery resources of the Pacific, in order to attain the maximum sustained yield of these natural resources.

"Conservation measures applied to fishery resources should be based on scientific findings and be equitably applied to all fishing peoples concerned."

● In addition to the statements by Mr. Brooding previously quoted, his closing address emphasized these points:

"In 1956 over one-half of a total Japanese catch of 10,000,000 Sockeye was taken east of 170° East Longitude. In 1957, nearly one-half of the Japanese catch of 20,000,000 was taken east of 170° East Longitude. There are no regulations for this Japanese high seas fishery equivalent in effect to those imposed on the United States inshore fishery.

"With no assurance of the application to the Japanese fishery of 1959 of conservation measures, such as cessation of fishing in the areas of intermingling or the equivalent, the United States faces the prospect of closing down entirely the fishery in Bristol Bay, with all the attendant hardships to the communities of western Alaska which are almost wholly dependent upon this fishery for their livelihood."

Swan-like Serenity

Laughter found small place in the North Pacific Fisheries Commission meeting in Tokyo, but the closing moments of the meeting produced uproarious laughter.

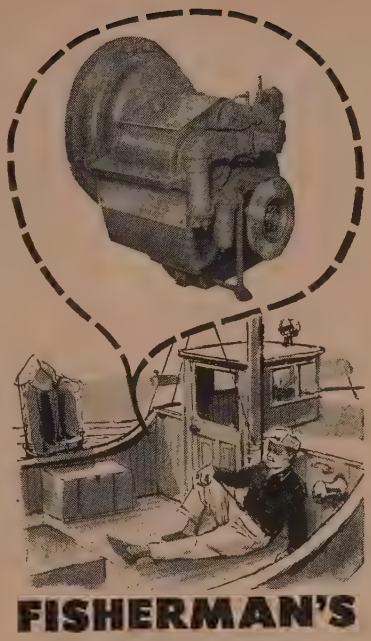
Iwao Fujita, retiring chairman of the Commission, was making his closing address. After the usual felicitations and expressions of good will and gratitude Mr. Fujita seemed to turn to the poetic imagery of Japan. He said:

"The meeting has been one of calm and comfort in its outward aspects. It has reminded me of a swan on waters, dignified and beautiful, moving in dignity and all serenity, but beneath the surface paddling like hell."

Japanese Can-Maker Heads MITI in Cabinet

Tatsunosuke Takasaki, long-time president of Toyo Seikan K.K., the principal can-manufacturing company of Japan, became Minister of International Trade and Industry in the new cabinet of Premier Kishi. As head of MITI, he resigned as president of the can company, where he was succeeded by Masao Yoshikawa, who had been vice president.

Mr. Takasaki also wished to relinquish his duty as president of the Great Japan Fishery Society, but his associates there persuaded him to remain.



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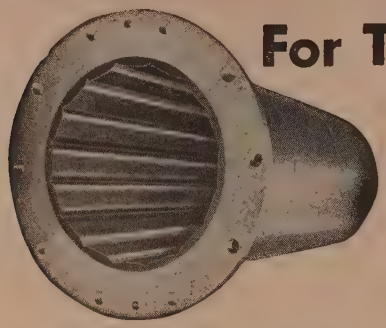

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72' multi-purpose fishing vessel "Silver Viking II" built by Yarrows, Ltd. uses Cutless Bearings.

LUCIAN Q. MOFFITT, INC.
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Engineers and National Distributors

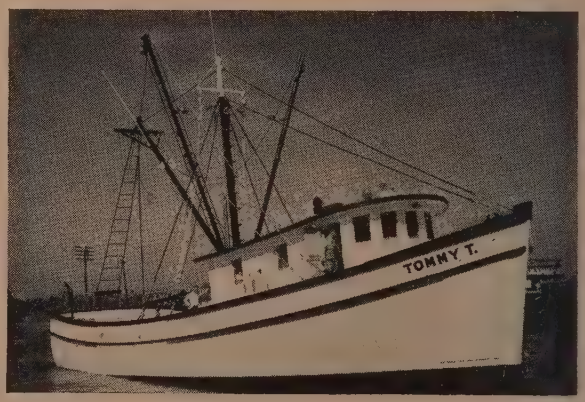
B.F.Goodrich *Cutless* BEARINGS
PROPELLER SHAFT

3 Hatteras Trawlers of new design ply Gulf and Florida waters with Tobin Bronze Shafting

MOREHEAD CITY, N.C., Shipbuilding Corp. is now building two new series of Hatteras Trawlers – one designed for Northern waters—and the other featuring the twin-boom shrimp rig for Southern waters. Excellent examples of the new Southern design are three delivered last Fall to owners in Florida and Texas. All three are equipped with Tobin Bronze Shafting.

TOBIN BRONZE® Shafting has proved itself through its dependable performance on thousands and thousands of pleasure boats, fishing and other commercial craft. It is this record of dependability that has made it first choice of boatbuilders and boatowners.

TEMPALOY®-917, Nickel-bearing aluminum bronze shafting was developed by The American Brass Company for use requiring extra high strength and lighter weight. Repowering with higher horsepower engines often means replacing original shafting, too. Tempaloy provides the needed extra strength with no increase in shaft diameter—saving costly alteration of bearing, stuffing box and housing assemblies. Features: toughness and high yield strength—high resistance to shock—excellent corrosion resistance—lighter weight—special straightening—close diameter tolerances—individually wrapped and trade-marked—reasonably priced.



The "Tommy T," 63-foot Hatteras twin-rig shrimp trawler delivered to Key West, Fla. Two similar boats, "Billy H" and "Tommy H," were delivered to Brownsville, Texas. All have 3" Tobin Bronze Shafts.

Both Anaconda propeller shafts are available through leading marine supply distributors. For detailed information, see your distributor or write: The American Brass Company, Ansonia Division, Ansonia, Conn. District Sales Offices: Los Angeles, Calif., at 14900 Garfield Ave., Paramount—San Francisco 4, Calif., at 120 Montgomery St.—Seattle 1, Wash., at 902 White-Henry-Stuart Bldg. 58111PF

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PROPELLER SHAFTING
MARINE BRASS AND BRONZE
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FOOD FISH MARKETING

News and Views of National Trade in Fish and Shellfish

Section of PACIFIC FISHERMAN — December, 1958

Canadian Salmon Sellers Cultivate Domestic Trade

● With a 2,000,000-case pack to dispose of, half of it Sockeye, British Columbia packers are concentrating on sales and distribution, the hectic production season behind them.

At November 20, shipments of canned salmon from B.C. to the United Kingdom totalled more than 400,000 cases, of which some 300,000 were Sockeye, and it was estimated that at least another third of this total would be shipped during the next few weeks. Just how much the United Kingdom would absorb as a result of the removal of import restrictions was still a matter for conjecture, but most calculations ranged from 600,000 to 700,000 cases.

The industry hoped to sell at least 800,000 cases of canned salmon in the Canadian domestic market, but in spite of the exceptionally big pack of Sockeye, most favored grade in Canda, it was doubtful whether sales would approach the record established in 1954-55, when Canadian consumers bought 935,000 cases for an all-time record. Prices were considerably less then than they are today.

The relatively high cost of canned salmon continues to be vigorously debated, and various consumers' groups have protested on the ground that with so many more fish caught and packed the industry should be in a position to reduce its prices and remove canned Sockeye from its luxury category.

The packers, of course, had their answer. They pointed out that, regardless of higher volume of production, their unit costs were as high if not higher than ever, since they were commited to pay a fixed price of 28 cents a pound to the fishermen for all Sockeye accepted. But the whole explanation was a complicated one and hard for the average housewife, already harassed by high prices of most other commodities, to fully comprehend.

The excitement that had prevailed in the market immediately following announcement of the United Kingdom's return to free, unrestricted marketing had pretty well disappeared by November; the scramble to place orders was over but not forgotten.

Mild Cure Pack Hits 8,700-Tierce Level

Best mild cured salmon pack since 1955 was counted as the 1959 season closed in November.

Industry observers compiled informal statistics indicating production of 8,700 tierces, with about 3,700 in Alaska; 3,200 on Puget Sound; 750 in British Columbia; 210 in Oregon; and an estimated 840-odd in California.

This compares with 5,789 tierces estimated by the same analysts at the same period in 1958.

Paladini Remodels Plant

A. Paladini, Inc., is remodeling its freezer plant on Sansome street, San Francisco. The object is to give the plant added efficiency.

At the Clay street plant a new 6 x 6 Frick ice machine has been installed.

California Imports of Frozen Tuna

Cumulative data in tons for 1958 through Nov. 15, and for other years to the nearest comparable date. Data from U. S. Market News Service.

	Albacore	Skipjack	Yellowfin	Unclassified	Total
San Francisco	2,876	213	6,503	...	9,592
San Pedro	9,027	8,030	31,706	125	48,888
San Diego	515	958	3,467	225	5,165
Total to Nov. 15	12,418	9,201	41,676	350	63,645
1957	17,008	10,024	19,730	615	47,377
1956	7,225	7,370	26,173	161	40,929

Wholesalers, Brokers, Play "Fish Jury"

Members of the Southern California Fisheries Assn. staged their own fish judging at their regular monthly meeting in November, and came to the verdict that their merchandise suffers from the way it is handled in Southern California retail markets.

The judging was staged with the co-operation of members of the U.S. Fish & Wildlife market staff on Terminal Island. Samples of run-of-the-case fish and seafood were gathered at random from markets in the Los Angeles metropolitan area, and were displayed at the meeting without identification of any kind whatever.

After the "judging," the fresh fish men returned to their meeting room and discussed the samples. Although several were in good shape when displayed, the consensus seemed to be that the great majority of samples had deteriorated considerably between the wholesale house and the housewife's refrigerator.

The retailers, it was agreed, were to blame in every case.

It was reported by a Fish & Wildlife attache that a survey recently carried out among housewives showed that courtesy and friendliness were the attractions that bring shoppers back to markets for repeat purchases. Price, it was said, was No. 7 in the list of considerations.

In a detailed and well-received report, Bob Sloan described the fish merchandising school being worked out by the Southern California Fisheries Assn. in co-operation with the Fish & Wildlife Service. Supermarket management, Sloan said, were enthusiastically behind the project, and were making suggestions as to methods of training their men.

The association has solicited a grant of $16,000 from Saltonstall-Kennedy funds to purchase equipment and meet other expenses of the school.

The school will set up cases for approved displays of fish and seafood and will in general teach supermarket employees how to judge fish and seafood quality and how to sell delicacies from the sea.

Sloan estimated that sales of fish and seafood could be increased 25%-50% in the Southern California area as a result of the proposed training.

Trap-Quality Pinks May Never be Available Again

● Effect of the prospective prohibition of Alaska salmon traps on trading over the next few months seemed of more concern to the primary salmon market as December opened than did the subject of sales during the Holidays.

If there are no traps in operation during the 1959 season—as Secretary of the Interior Seaton has promised—then trap-quality Pinks will not be available in future packs. *Why not pick up all we can out of the stocks available now?*

That's a question which some of the sharp buyers seemed to be asking; and sellers' letters to their trade were suggesting the probable effect this would have on future demand and price.

Remember: no traps, no trap Pinks.

● Guarantees, so some salmon packers are prescribing, shall be on this basis hereafter:

Salmon purchased will be price protected against packer's own decline on entire quantities covered by invoice for 30 days after date of actual delivery to buyer as determined by:

(1) Date of pickup from public warehouse or steamer dock; or

(2) Date of rail car arrival at buyer's warehouse or siding; or

(3) Date of truck delivery or pickup at trucking terminals.

● Limited amounts of fall Chums, offered as strictly price merchandise, were available in late November at $16 from several Seattle brokers, against a general pricing of $16.50 for fall Chums and $17 for "fancy" grade.

● Seattle quotes on canned tuna showed a modest decline going into the latter part of November, when fancy Albacore, 48 cans of 7-oz. in oil, was widely available at $13; fancy Lightmeat at $11.50; and lightmeat chunks, 48/6½ oz., at $10.

Three-Quarter Tuna Can Getting Established

Supermarket chain managements are at this writing withholding their opinions on the new "three-quarter" tuna can introduced this Fall by Chicken of the Sea and Star-Kist Foods.

One of the biggest supermarket chain buyers boiled the general attitude down pretty accurately when he told a *Pacific Fisherman* reporter: "I haven't seen enough sales reports yet on the new size to form an opinion. When I see the reports, I will form my opinion very simply: If it sells, we like it; if it doesn't we don't."

Another chain buyer said that although the new size was selling fairly well — not spectacularly — the established sizes were continuing to sell at about the same levels as before the new size was introduced. In other words, sales of the new size were largely new tuna business.

Another buyer, on the other hand, said exactly the opposite: That sales of the three-quarter size had slowed down the movement of the old sizes.

Several buyers pointed out that so far the larger size has been on special at 8 cents off the price, and was therefore probably selling better than it might when the price goes up. What happens, then, they said, will be more significant than what is happening now.

It was also pointed out that although it is more economical to buy the new size in comparison with the smaller size of equal quality and price, still there is too much "19-cent tuna" as he called it, on the shelves to attract the strictly price buyers.

Everybody agreed, however, that the new size is moving; and the new cans were found in every supermarket visited. Distribution seems to be nearly, if not fully, 100 per cent in Southern California.

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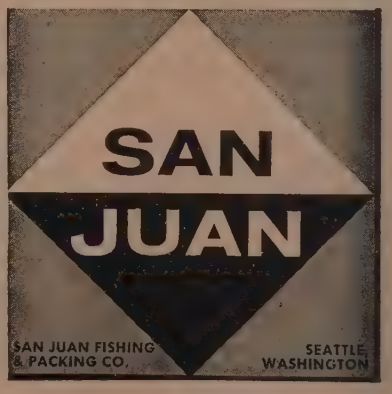
frozen fresh
HALIBUT AND SALMON
portion controlled steaks
Complete line of
FROZEN FRESH SEAFOODS



Norfish Sales Observes 25 Years

Norfish Sales Co., Oakland, last month celebrated its Silver Anniversary, and T. Neil Taylor, president and founder of the company, was receiving the congratulations of the northern California fish industry for 25 years of service to producers and wholesalers in the area.

Over the two and a half decades the company has compiled and imposing record in the sale of seafoods, and in growth of service.

The company occupies one of the Pacific Coast's most modern and up-to-date plants for the handling of frozen sea foods at 505 Cedar st., Oakland. It's a lot different from the 6 x 12' cubby hole that was the company's first office with National Ice & Cold Storage Co., Oakland, in November. 1933.

E. J. Peterson, who has been with the company for the past 10 years, is vice-president and sales manager. Dick Whittington has been in charge of consumer packaged and portion control sea food sales, and Miss Doris Harrison is bookkeeper.

The **Tri-O-Pak,** product of **Breast-o'-Chicken Tuna Inc.** (Westgate) of San Diego, Calif., is the newest merchandising device to increase tuna sales through multiple purchases. By means of an attractive, colorful carton, enclosing three standard 6½-oz. cans, the housewife is persuaded to buy three cans at a time instead of one. The carton, in red, green and gold on white, commands attention and is a convenient container. The package is currently on an eight-cents-off "deal" in supermarkets throughout the West. The lithographed can containing **Tunies** (weiners made from tuna loins) is a new container for an established product. Formerly Tunies were packed in film and sold in refrigerated deli cases. The new can eliminates the need for refrigeration, lengthens the shelf life of the product forever if necessary, and does away with expensive and troublesome servicing of deli counters. Following encouraging market tests in Milwaukee, the canned product is now on the market in San Diego, Los Angeles and San Francisco. Tri-O-Pack carton is by Robert Gair Div., Continental Can Co; Tunies can by American Can Co.

Bentley-Markey, Brokers, Add Icelandic Items

Bentley-Markey, Inc., San Francisco seafood brokerage firm, has been appointed distributor in northern California for the Samband line of Icelandic quick frozen fillets, in one and 5-lb. packaged.

Products are cod, haddock, ocean perch and ocean catfish.

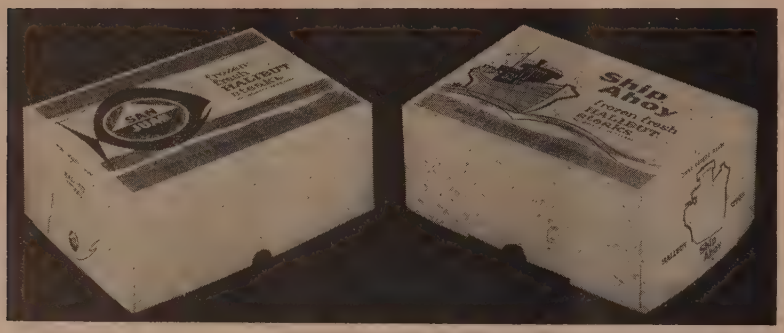
San Francisco Celebrates Fish 'n Seafood Parade

John Martin, San Francisco food broker, was a busy man with San Francisco's Fish 'n Seafood Parade, Oct. 6-12. Mr. Martin was chairman of the event for the Northern California Seafood Institute.

A supply of National Fisheries Institute point-of-sale material was purchased and furnished to wholesalers for distribution to fish markets, restaurants, super-markets and chain stores.

A. Ralph Ferrandini, San Pedro, fishery marketing specialist, U. S. Bureau of Commercial Fisheries, was in San Francisco furnishing to food editors of the newspapers in the area with sea food recipes. Also spot announcements were furnished to radio stations.

Proclamation by Gov. Goodwin Knight, and the mayors of the cities in the area were made regarding Fish 'n Seafood Parade.



San Juan Redesigns Five-Pound Cartons

In a move to modernize and tie their institutional package designs in with their consumer packaging, San Juan Fishing & Packing Co. of Seattle has completely redesigned their five-pound cartons for both the Ship Ahoy and San Juan brands. Salmon, halibut, and swordfish steaks in portion control, layer and cello wrap are all being distributed in these colorful new cartons.

Particular care has been taken to emphasize the individual items and weights to make it easier for users to identify them in the freezer. A prominent space on each end of the carton has been left for individual stamping for weight and type of pack—in each case the information appears within either the fish or the ship outline.

San Juan's newly designed living-fish trademark, which carries the San Juan name on the signal flag in the circle, is featured prominently to tie the institutional five-pound packages to the consumer items. Colors are red and blue-green, with the background simulating water and waves in a sea-green color.

The Ship Ahoy cartons are done in red and blue-green also, and include a modernized version of the fishing boat known on all Ship Ahoy packages.

They Add Up To A Lot of Sales!

Oceanic
SALES COMPANY
3302 SMITH TOWER
SEATTLE 4, WASH

Western California Fish Adds York Machines

Western California Fish Co. has made many improvements since it moved into the old quarters of Balestrieri Seafood Co. at 123 Jackson st., San Francisco.

Western Cal has been at its old location on Clay street for the past 13 years.

Among the improvements made were the addition of three 5 x 5 York ice machines, added to the compressor capacity that was already in the plant.

Balestrieri Seafood Co. is located at 432 Clay st., where Joe Balestrieri started the business in 1938.

Fishmeal is Topic For WECO Meeting

The spotlight was focused on Wilbur-Ellis Co.'s oldest and one of its favorite trading commodities when a group of WECO men from various U. S. and Canadian offices met with Vice-president R. B. Mattson and Vice-president E. W. Lockwood at San Francisco headquarters of the company for a general discussion of fishmeal.

In addition to Messrs. Mattson and Lockwood who led the discussion, those attending were Rod Anspach, Los Angeles; Ray H. Mattson and Leo Smith, New York; Don Thomson, Seattle; Ted Dersch, Vancouver, B. C., and Terry Coonan and Dick Deibert, San Francisco.

Seattle Market

Market prices currently quoted at presstime by Pacific Northwest brokers and cannery sales department, cases of 48 tins, unless otherwise specified, good quality, as reported by the U. S. Bureau of Commercial Fisheries, Market News Service.

Items and Packages	Per Case
Puget Sound	
Sockeye, halves	$20 -22
Sockeye, quarters	12.50-13
Sockeye, flats	34
Alaska	
Red, talls	33 -35
Red, halves	19 -23
Red, 4-lbs. (12)	34
Pink, talls	21 -22
Pink, halves	13 -14
Pink, 4-lbs. (12)	22 -24
Coho, talls	27 -28
Coho, halves	15.50-16.50
Coho, 4-lbs. (12)	29 -30
Chum, summer, tall	17
Chum, fall, tall	16 -16.50
Chum, summer, halves	10.50-11.50
Chum, fall, halves	9.50-10
Chum, 4-lbs. (12)	18
Chinook, talls	30
Columbia River	
Blueback, halves	23
Chinook, ½ oval (12)	12.75-14.50
Fancy, halves	25 -26
Fancy, quarters	13.75-14.50
Choice, halves	17 -17.50
Choice, quarters	10 -10.50
Silver, halves	17 -17.50
Silver, quarters	10 -10.50
Tuna, Northwest Pack—	
Albacore, fcy., 7 oz.	14.50-15
Yellowfin, chunk, 6½ oz.	10 -10.75
Tuna, Featured Pack—	
Albacore, fcy., 7 oz.	16.10-16.25
Albacore, fcy., 3½ oz.	9.50- 9.65
Albacore, chunk, 6½ oz.	11.00-14.30
Albacore, chunk, 3 oz.	7.25- 8.50
Lightmeat, fcy., 7 oz.	15.00
Lightmeat, fcy., 3½ oz.	9.10
Lightmeat, chunk, 6½ oz.	13.25
Lightmeat, chunk, 3 oz.	7.65- 8.05
Canned Crab—	
Dungeness, 24, 6½ oz.	11.50
King, 48, 7½ oz., fcy.	29
King, 24, 15 oz., fcy.	26.50
King, 24, 7½ oz., fcy.	14.60
Northwest Shrimp—	
Wet Pack, 24, 6½ oz.	8

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Gentlemen:

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Sincerely yours,
SHEPHERD MARINE
W. W. Shepherd

Call Bill Poole (Raymond 3-7191), Los Angeles, or Rod Bangham (Belmont 9-9471), San Diego, regarding compact, economical KAAR radiotelephone for **your** boat. Sizes: **outboard to 150 watts.**

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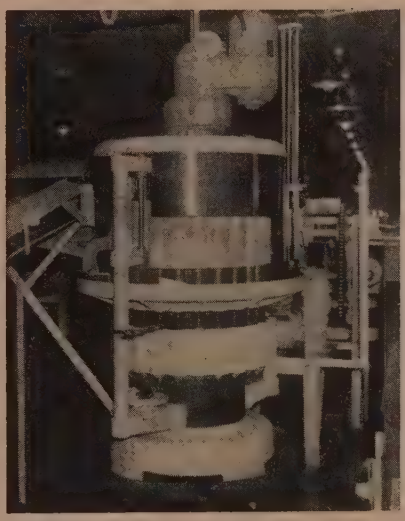

Leading tuna canners are now using the PAK-FORMER for their Chunk and Grated Style Packs. A variable speed drive permits filling speed adjustments of between 140 and 250 cans per minute. Available to the industry under similar terms as our PAK-SHAPER.

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P. O. Box 1332 Warrenton, Ore.

Fraser Chum Run Poor, With Scant Escapement

One of the few dark spots in British Columbia's salmon picture this season is the relative failure of the Chum salmon run in the Fraser River.

There has been an appreciable decline in the Chum run for several seasons, and lack of spawners to the Fraser caused such a critical situation in mid-November that the Canadian fisheries department suspended net fishing in that area.

Following a closure of ten days' duration fishing was carried on November 10 and 11, resulting in a catch of some 52,000 Chums, bringing the total Chum harvest for the Fraser area for the current season to 180,000 fish.

But since mid-October there was virtually no Chum escapement to the usual spawning stream on the lower Fraser, and supplies of early run Chums to that area prior to October 15 were light.

California Whaling Stations Report Satisfactory Kill

San Francisco Bay bids fair to becoming the Nantucket of the 20th century, with two whaling plants now operating.

Del Monte Fishing Co., at Pt. San Pablo, Richmond, is now in its third year of successful operation, and Golden Gate Fishing Co., a new company, has wound up its season with a catch of 60 whales—40 fin backs, and the other 20 divided among sperm, humpback, and blues.

President of Golden Gate Fishing Co. is Leon Barlas. Vice-president and general manager is Hermann Foland, well known in the whaling and fishing business, and a partner in Hunter & Foland Fish Co., Eureka.

Robert Casebeer is superintendent. Mr. Casebeer worked for Hunter & Foland in Eureka for six years, and was associated with Mr. Foland's Peruvian whaling operation, as superintendent. He also worked for Del Monte Fishing Co. as night superintendent.

The plant of the Golden Gate Fishing Co. is in the old Pittsburg Packers building on Pt. San Pablo. Whales are flensed there, and blubber, meat and offal are sent to the Independent Rendering Co., Pt. San Pablo, for processing. The meat is frozen and packaged for mink food.

The company has one killer ship, the 136' *Lynnann*, Lloyd Newton, skipper.

Albert D. Levy, Washington Fish & Oyster Co. of Calif., San Francisco, is back at his desk after a month's business trip to Japan.

C.R.P.A. Pioneers With Staff Fisheries Biologist

"To keep constantly abreast of current biological research and management programs and trends," the Columbia River Packers Association, Inc., in November announced addition of a research biologist to its staff. Filling the new position is John R. Gilbert, for 11 years a member of the Fisheries Research Institute staff, specializing in Bristol Bay investigations.

John R. Gilbert, fishery biologist, who joined C.R.P.A. in November after 11 years on the staff of the Fisheries Research Institute.

This is believed to be the first time an American fisheries company has engaged a staff biologist to study the primary resources upon which the company depends.

In announcing the company's pioneering policy, T. F. Sandoz, president, said:

"Scientific management of the major salmon resources of the Pacific Coast, located in the Columbia River, Puget Sound and Alaska, is assuming a more important role than ever before. This company has extensive operations in each of these areas. Mr. Gilbert will observe the activities of the various agencies which regulate and manage these resources and will work with them."

Mr. Gilbert has devoted himself to research fisheries biology in Alaska since he was graduated from the University of Washington College of Fisheries. He is a son of DeWitt Gilbert, editor of *Pacific Fisherman*, and a brother of William S. Gilbert, in the sales department of the New England Fish Co.

Sardine Plants Sold

The Moss Landing, Calif., fish cannery and sardine reduction plant owned by Hovden Food Products Corp., Monterey, has been sold to Wesley Dodge & Associates, Monterey, and will be dismantled and the machinery and equipment sold.

Northern Packing Co., San Francisco sardine canning and reduction plant, formerly owned by George Christo, has been sold to the Login International Corp., San Francisco, which will probably dismantle the plant and sell the machinery and equipment.

New Salmon Trap Uses Tranquilizer

A new type fish trap, designed to by-pass the construction area of the huge new Trinity Dam in northern California, has been put into operation by the California Department of Fish & Game.

The new trap uses tranquilizers to lull the fish into a groggy condition in which they can easily be picked up and trucked to spawning grounds above the construction area, where they spawn naturally.

The new fish trap, which is a revolutionary design and expected to arouse a lot of interest in conservation circles, consists first of a weir which, built diagonally across the stream below the construction zone, edges the fish toward a ladder which they climb to a big holding tank 68 ft. by 12 ft. and about 4 feet deep.

Above the holding tank is the tranquilizing tank, which holds about 1500 gallons of water and 75 cubic centimeters of quinaldine, a tranquilizer. The fish swim up an artificial waterfall into the tranquilizing tank, where they get sleepy and sink toward a built-in escalator which moves them up into a fish planting truck. In the truck they ride an hour or so to release sites on the Trinity or tributaries.

By the time they are released from the truck, the fish are de-tranquilized and can go on about their business of spawning in a normal manner.

Japan Builds Sardine Factoryship for P. R.

A modern 2,000-ton sardine factoryship, equipped for canning and reduction of sardines, was launched at the Miho shipyard, Shimizu, Japan, at the end of June for the Philippines.

It will be operated by the Estancia Farmers Cooperative and Marketing Association with headquarters in Manila but production base on Panay Island.

The vessel is furnished with the best of Japanese equipment and is said to have cost Y 385 million. The vessel is named *Magsaysay*, and will be followed by a sistership, also for the Philippine Republic.

It is said that four 75-ton seiners are being ordered to supply the first factoryship.

D. L. Malcolm Passes

D. L. Malcolm, a retired president of The Linen Thread Co., died in November at his New Jersey home at the age of 75. A native of Scotland, he had served The Linen Thread Co. for 50 years at the time of his retirement in 1953.

Nanaimo Research Station in Service Half a Century

The Nanaimo, B. C., biological station of Canada's Fisheries Research Board is celebrating its 50th anniversary this month. From modest beginnings, the station has become one of the world's larger and most efficient operations of its kind, directing activities over the full length of the province coast and from far in the interior to the mid-Pacific area.

In this work, the station employs 100 scientists and technicians under the direction of Dr. A. W. Needler, and an additional staff during a part of the year. It has its own fleet of research vessels and several field stations.

While the Research Board has kept pace with the expansion of Canada's Pacific fisheries ever since its inception, post-war developments have been particularly impressive, calling for a steadily increasing effort and a larger organization. The year-round scientific staff, for instance, increased from 12 in 1943 to 46 in 1958, and in 1949 the presently occupied four-story concrete laboratory at Departure Bay was completed on the site of the original frame building erected in 1908. Additional accommodation has been provided since the main building was built.

The war, through creation of a demand for bottom fish and consequently an otter-trawl fishery, stimulated work in a new field. Fears of overfishing led to the initiation in 1943 of a program including statistical study of the fishery, sampling of the more important groundfish stocks and study of their life histories and migrations in order to provide the basis of regulations as required. Development of co-ordinating regulations governing Canadian and U. S. fishing of the same stocks has recently involved some co-operative studies.

The salmon fisheries, of course, have occupied much of the station's attention, and while the Sockeyes and Pinks are now under the control of the International Pacific Salmon Fisheries Commission, other salmon fisheries have been intensively studied by the biological staff, especially the Skeena River runs. Pollution problems related to the salmon fishery have been the subject of considerable investigation.

The station has also worked on artificial methods of increasing salmon abundance, and surveys have been made on the conditions required for the incubation of salmon eggs and on their occurrence in the gravel beds where salmon spawn. Practical means of assuring conditions under which larger numbers of eggs will survive are now being explored, and experiments are in progress on the improvement of techniques of hatching and releasing fry in the light of recent advances in knowledge. Artificial propagation of salmon offers the station one of its most challenging problems.

In a recently published booklet commemorating the station's half century of service, Dr. Needler writes:

"No field of research offers greater challenges to the scientist or more varied problems to interest him. The unseen world of the ocean can not be observed directly and is difficult to study, but has secrets of great scientific and economic importance. Every problem of life itself is reflected in fisheries problems; every branch of science must help to solve them."

Whale Catch Sets Record In B.C.; Baleens Abound

Record catch of whales was chalked up by the British Columbia Packers fleet in the waters off northern Vancouver Island and the Queen Charlottes this season. The six whale catcher boats accounted for 744 whales, compared with 635 last year.

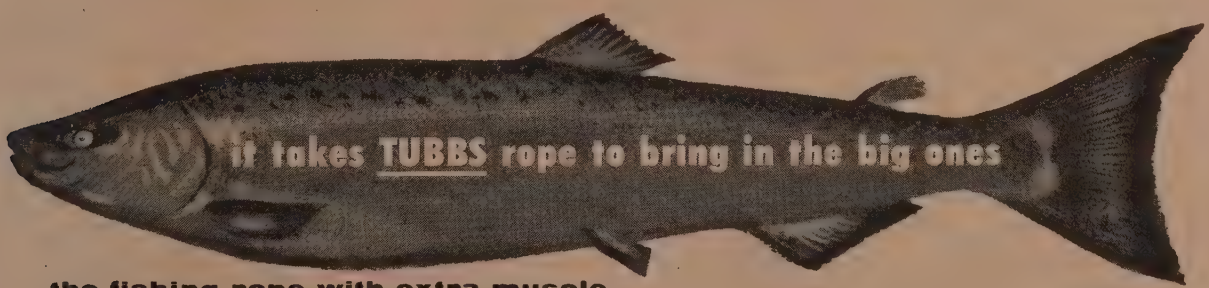
The season was notable for the comparatively large number of baleen whales caught; they are plankton feeders, whereas sperm whales prefer feeding close to the sea bottom. More than 500 Fin whales of the baleen type were taken, compared with only 114 sperms.

Most of the Fins were encountered during the midsummer period, concentrated in an area about 50 to 70 miles west and south of Cape Cook, off Quatsino Sound.

Baleen whales have a low oil content and the carcasses are used chiefly for mink feed and fertilizer, for which there continues to be a strong market. The world price for sperm oil is so low that Fins and Seis are taken in preference. Only eight of the big Blue whales were taken this season.

The normal whaling season prevails from April 1 to September 30, but unfavorable weather kept the boats in port after September 18.

The company continued to use Coal Harbor in Quatsino Sound as its principal shore base for processing.



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Significant Sockeye Facts For Guidance in Year 1961

● Annual reports of the International Pacific Salmon Fisheries Commission can provide profitable as well as significant reading — if you are willing to wait four years, and in those four years do not forget what you read.

Some excerpts from the 1957 report will provide guidance in the spring of 1961. You'll find these on Page 19, where escapements, particularly of the Late Stuart and Quesnel races, are discussed:

● "The later arrival of the spawning escapement in 1957 proved to be extremely beneficial in terms of eggs deposited because of favorable environmental condition. Approximately three times as many eggs were actually deposited by the Late Stuart and Quesnel spawners in 1957 as were deposited in the brood year of 1953."

● "The only known adverse factor affecting the 1957 spawning escapement was a temporary block at Bridge River Rapids . . . No damage to the run is believed to have occurred except to an estimated 5,000 Sockeye which backed downstream."

● "In general, the 1957 escapement of Sockeye was excellent and spawning conditions were very good. From a management viewpoint it may be stated that the regulatory requirements have been fulfilled for providing a large potential increase in the size of the future cycle run in 1961. However, it should be pointed out that low sea survival has been a major factor in controlling the size of the 1955, 1956, and 1957 runs; and the effect of ocean conditions on the size of the cycle run in 1961 will not be measurable in any degree until the return of three-year-olds in 1960."

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Shellfish Laboratory First on Pacific Coast

Completion of the first Pacific Coast shellfish-sanitation research laboratory was noted on November 14 when the State Health Department and U. S. Public Health Service held an official opening at the laboratory located on Burley Lagoon at Purdy, Wash.

The laboratory, staffed by a four-man team of research scientists from the Public Health Service, will operate for a minimum five-year period. The scentists will conduct experiments on the sanitary bacteriology of harvesting, processing and marketing of commercial species of shellfish. From their studies, they hope to present evidence for the establishment of more valid sanitation control standards pertaining to Pacific Coast oysters and clams.

Fisheries Hold Open House

Invitations were extended to several hundred people in the industry to attend the annual open house and fish barbecue at the Washington State Department of Fisheries Puget Sound office in Seattle October 8. The visitors were treated to fish of every variety prepared to every recipe; event was given by the department in cooperation with several fisheries associations and under the name of Governor Albert D. Rosellini and Director Milo Moore.

Dominic Selvaggi Passes

The many friends of Dominic "Blackie" Salvaggi, 56, for 16 years foreman of the Tom Lazio Fish Co., Eureka, Calif., were saddened to learn of his death from a heart attack.

Mr. Salvaggi's place has been taken by Joe Sabella, formerly Eureka manager of Consolidated Fisheries, Inc.

Fish Oils Found Useful In Iron Ore Metallurgy

● Chemistry and technology often make strange companions. Three years ago not many people would have dreamed that happenings in the mining industry might have far-reaching effects on the fish-oil industry. Yet, this is the result of a project sponsored by the Bureau of Commercial Fisheries at the School of Mines and Metallurgy of the University of Minnesota.

Supplies of high-grade iron ores are disappearing from the Mesabi Range in northern Minnesota, and concentration of low-grades is becoming mandatory.

When the Bureau of Commercial Fisheries started its research on fish oils, Maurice Stansby, chief, Pacific Coast Technological Research, contacted Dr. S. R. B. Cooke, now Director of the School of Mines and Metallurgy, about the possibility of applying fatty acid fractions from fish oils in the beneficiation of low-grade ores. Dr. Cooke was interested and a project was started. First results were discouraging from the standpoint of utilization of fish oils. A high degree of unsaturation, a unique property of fish oil, was apparently a disadvantage. The work raised a number of fundamental questions, however, and Dr. Cooke started to do some basic research to answer them. The result was that he capitalized on the originally detrimental property of unsaturation. Iron ore normally had been floated from the impurities. As a result of his research, Dr. Cooke, reversed the process, depressed the ore and floated the impurities away from the iron ore. In this case, the unsaturation of the fish-oil fatty acids are an advantage. If this proves practical on a commercial basis, large amounts of fish-oil fatty acids may be utilized in flotation of low-grade ores.

Pollution Study Asks For Increased Budget

A budget of $520,000, increased from $336,000 for the current biennium, is what the Washington State Pollution Control Commission feels it will need to step up present work, according to Harold Miller, new commission director. Miller told legislators at a recent Interim Fisheries Committee hearing in Seattle that because of limited funds the commission staff has only been able to average one inspection a year for each case of industrial and municipal pollution in the state.

He will propose hiring of a neutral consultants-board, two biologists and an engineer, to study the pulp-mill-pollution issue.

Problem of Radioactive Waste Studied

The tremendous and growing importance of the radioactive waste disposal problem in the ocean waters off the California coast is reflected in the fact that the Department of Fish and Game, Marine Resources, is giving more and more time to it.

A number of meetings to discuss various aspects of radioactive waste disposal in the ocean have been held. After one with members of the State Department of Public Health a Marine Resources operations special projects program on the testing of barrels for the disposal of wastes was formulated.

Five types of disposal barrels were designated for testing—similar in construction to those used by the industry. This test, to determine the integrity of the barrels at various depths of water, was conducted aboard the N. B. Scofield. The tests showed that all barrels not fitted with a pressure releasing device would collapse between 100 to 400 fathoms. The result of using the present type barrel would be to release deadly radioactive material in relatively shallow water, where food and game fish abound.

According to the Department of Fish and Game, the potential hazards to fish and wildlife (beside those to the human population) brought on by the development of nuclear energy are so great that only by keeping informed will the department be able to insure proper consideration of the fish and game resources coincident with this development.

John R. Grigg Dies

John R. Grigg, credited with being the first man to get a permit from the California Fish & Game Commission for the straight reduction of sardines for fish meal and oil in the San Francisco Bay area, and thus the father of a once booming industry, died at his home in Orinda, Calif., last month after a short illness. He was 70.

Mr. Grigg founded Old Capitol Packers at Benicia, Calif., in 1936, and opened up a straight reduction plant. Later on he was instrumental in the formation of many other sardine reduction plants in the San Francisco Bay area, and was a leader in the industry.

He also started a whaling company at McNear's Point, near San Rafael, Calif., in 1936 and that year processed 66 whales, but the plant shut down on account of the low price for whale meal and oil.

Of late years he was acting in an advisory capacity to the Del Monte Fishing Co., the highly successful whaling operation at Pt. San Pablo.

Heart Disease Diet Holds Rich Potential for Fish

Competition in world markets continues to be one of the major problems of the Canadian fishing industry, C. Gordon O'Brien, Ottawa, manager of the Fisheries Council of Canada, told a meeting of the Canadian Institute of Food Technology in Montreal recently.

"Other countries have lower standards of wages, and can equip themselves with the necessary vessels and gear at less cost than we can in Canada," said Mr. O'Brien, who added that Canadians and Americans were rapidly increasing productivity per man and improving quality of the fish products.

Mr. O'Brien told the meeting that there was vast scope for technological advances in the fishing industry and that medical research with respect to fats in the human diet and the role of chloesterol in the incidence of heart disease was being closely followed.

"It is too soon to be definite about these findings," declared Mr. O'Brien, "but already there has appeared some evidence that the unsaturated fats of fish, lacking in cholesterol, may prove more important in the diet than we have so far realized."

Fall Kings Return To Ketchikan Hatchery

Alaska Department of Fish and Game is experimenting to see if a fall run of King Salmon can be induced in Alaska to follow present spring and summer runs, using the same type of short coastal streams they do in Washington, Oregon and British Columbia. First returns from the experiment at the Ketchikan hatchery were announced by director C. L. Anderson early in October; 50 fall Kings had returned, three-year olds released as fingerlings in 1956, with more expected in the month and a greater number of four-year-olds in 1959.

Introduction of fall King salmon have now been made three years in succession with eggs from the Washington State Fisheries hatchery at Soos Creek near Auburn, and the fourth lot of eggs will go to Ketchikan for hatching this winter. This will provide the full four-year cycle and if it succeeds the surplus supply of eggs can be used in stocking other suitable areas, according to Anderson. Silvers are also returning to the Ketchikan hatchery, part of another brood stock-raising experiment.

Both Kings and Silvers ascend the fishway from Ketchikan Creek to the Deer Mountain hatchery. Stanley Swanson, district biologist for the department in the Ketchikan area, has been in charge of these experiments since their inception.

Crescent City Shrimping

A. Puccini & Sons, Fishermen's Wharf, San Francisco, has started its shrimp processing operations at Crescent City. Sam Mitola is foreman in charge, and Sam reports that prospects look good for an excellent season.

The Langfield Co., Oakland, Calif., has been appointed exclusive distributor for the Ocan Supreme brand of vacuum packed crab meat produced by A. Puccini & Sons.

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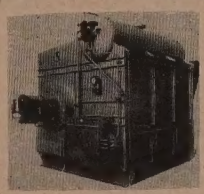
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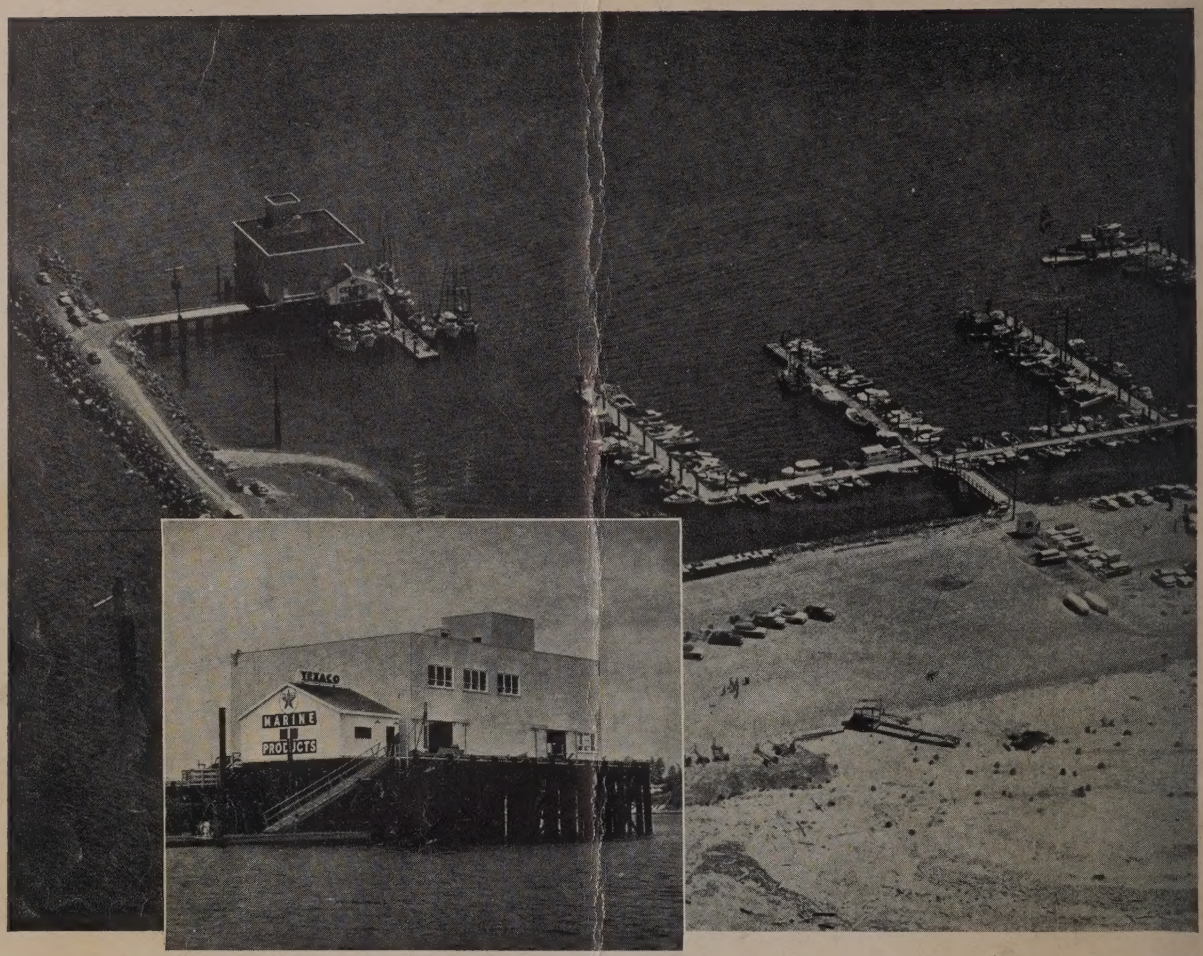

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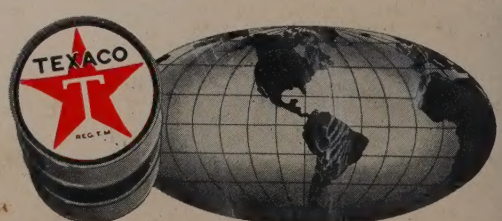

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